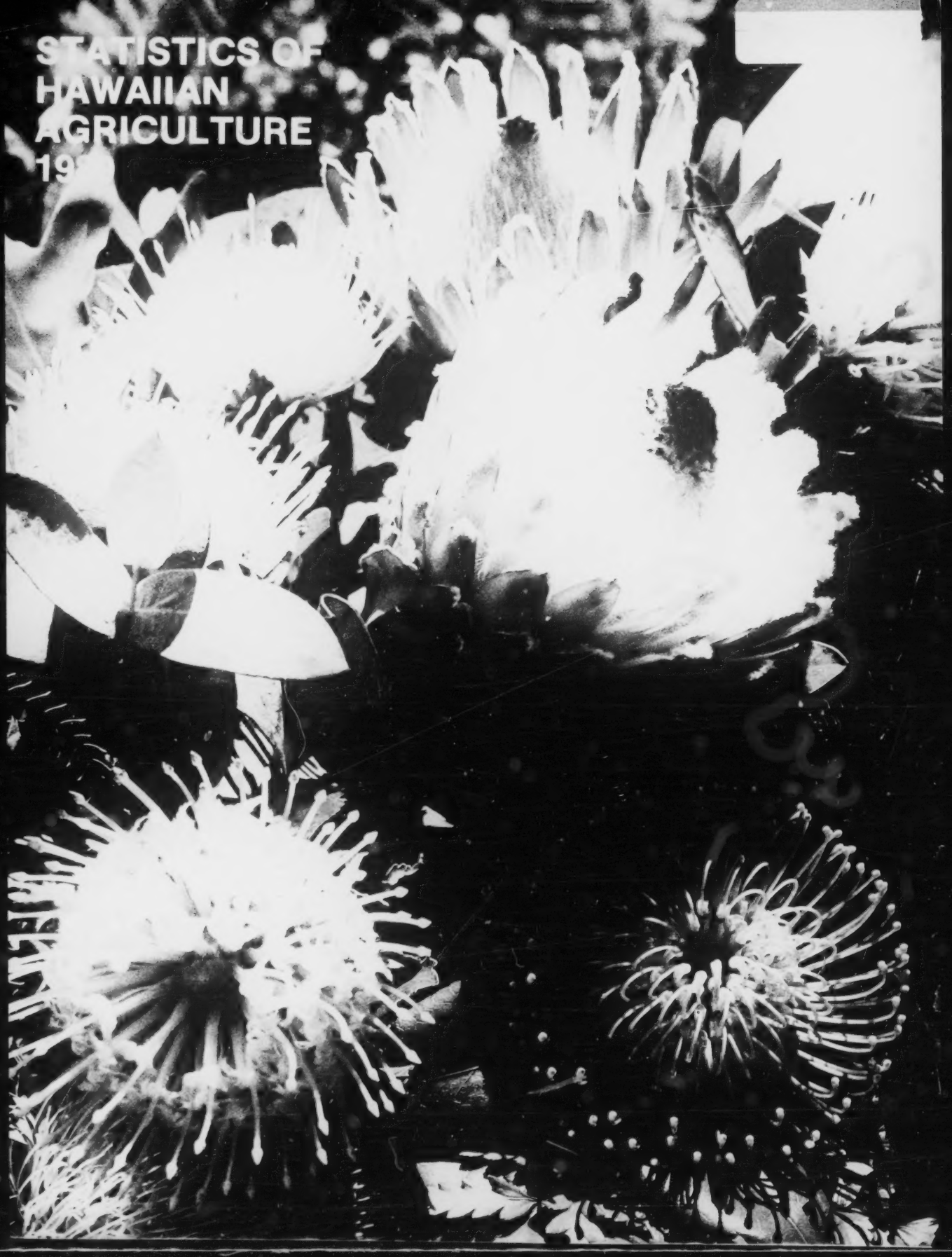
STATISTICS OF HAWAIIAN AGRICULTURE 19



Cover: Protea flowers, grown principally on the islands of Maui and Hawaii.

STATISTICS OF HAWAIIAN AGRICULTURE
1989

Prepared by
HAWAII AGRICULTURAL STATISTICS SERVICE
P.O. BOX 22159—Honolulu, Hawaii 96822
September 1990

A Cooperative Function of

Hawaii
Department of Agriculture
Marketing Division

United States
Department of Agriculture
National Agricultural Statistics Service

EXECUTIVE CHAMBERS

HONOLULU

JOHN WAIHEE
GOVERNOR

MESSAGE FROM GOVERNOR JOHN WAIHEE

In this thirtieth year of Statehood, a comparison of agriculture's remarkable growth and change since then is inevitable. "Statistics of Hawaiian Agriculture" shows that while the value of agricultural production has risen to new highs during the period, the commodities comprising agriculture's contribution to the State's economy have changed as well. Furthermore, the rankings of the State's important farm commodities changed continuously during that time.

The changes occurring in the types and mix of commodities produced by Hawaii's farmers since Statehood is evidence of their perseverance and adaptability to meet challenges. The next thirty years promises to be even more challenging, with many new obstacles already looming on the horizon. We should salute Hawaii's farmers who, in the face of adversity, have managed to build a very important part of the State's economy. The continued viability of this industry is vitally important to all citizens of this State. Join me in congratulating Hawaii's farmers for a job well done.

JOHN WAIHEE

JOHN WAIHEE
GOVERNOR

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Led by gains in diversified agriculture, Hawaii's farmers generated the second best year ever in 1989. The $577 million of farm level cash receipts is second only to 1980, a year of extremely high sugar receipts. The overall change from 1988 was less than one percent, reflecting a sharp decline in pineapple receipts and sugar values virtually unchanged from a year earlier. The pineapple crop suffered the effects of poor weather and reduced acreage.

Receipts from diversified agriculture more than offset the lower combined sugar and pineapple totals and established a record high in the process. The State's producers of diversified farm products generated nearly $272 million in sales, 6 percent higher than the previous year. The State's leading diversified crop, macadamia nuts, registered record farm level sales of $44.9 million, about 10 percent above 1989, and follows on the heels of a 14 percent increase last year. Also establishing record totals were livestock and products ($91.8 million) and flowers and nursery products ($62.3 million). Percentage wise, coffee was the largest gainer in 1989 as receipts jumped 35 percent to $8.9 million.

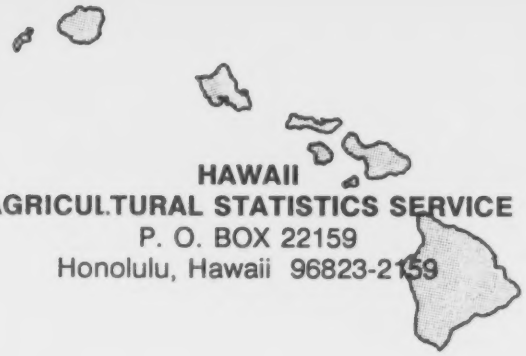
This year's feature is "30 Years of Statehood" and monitors the progress of Hawaiian agriculture from 1959-89. Special tribute should be paid to the many farmers, agribusiness, industry, association contacts, and University personnel who have voluntarily provided information to the Hawaii Agricultural Statistics Service during the past 30 years. Without their cooperation, these reports would not have been possible.

"Statistics of Hawaiian Agriculture" is published annually by the Hawaii Agricultural Statistics Service and is a joint effort of the Hawaii Department of Agriculture and the National Agricultural Statistics Service, U.S. Department of Agriculture. Through this cooperative agreement, an extensive schedule of 180 reports are published each year.

Yukio Kitagawa
Chairperson, State Board of Agriculture

Hawaii
Department of Agriculture
Marketing Division

United States
Department of Agriculture
National Agricultural Statistics Service



HAWAII
AGRICULTURAL STATISTICS SERVICE
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Honolulu, Hawaii 96823-2159

It is only fitting, as we mark agriculture's progress since Statehood thirty years ago, that recognition should be given to the many farmers and agribusiness firms who have cooperated with the Hawaii Agricultural Statistics Service during that period. Also contributing valuable information spanning those three decades were other State and Federal Agencies whose contributions are found throughout many of our estimates. Most of those individuals who were our valued reporters thirty years ago have now been replaced by other dedicated producers, businesses and agencies. Without their collective participation, the complete record of Hawaiian agriculture during those thirty years wouldn't have been possible.

HASS field staff are responsible for much of the information contained in this bulletin. James Yamaki and Llewellyn Suzuki are responsible for the Big Island, Renan Mahikoa for Maui, Molokai and Lanai, and June Okamura and Wendell Au for Oahu and Kauai. Major data collection activities also involve NASDA and State enumerators.

This publication involves the entire staff of the Hawaii Agricultural Statistics Service, and I wish to extend my thanks to all for their dedication and professionalism, but especially to Joyce Jay and Sandy Fukunaga, editor and composer, respectively, of this year's publication. Special recognition is also extended to Ronald Nakamura for his ingenuity and leadership on the special feature.

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Reports published by this office are free to Hawaii's agricultural producers and other contributors. A nominal fee is charged others for printing and mailing costs. Please see page 99 for a list of reports, the frequency of publication and our office street and mailing addresses.

Sincerely,

Homer K. Rowley
State Agricultural Statistician

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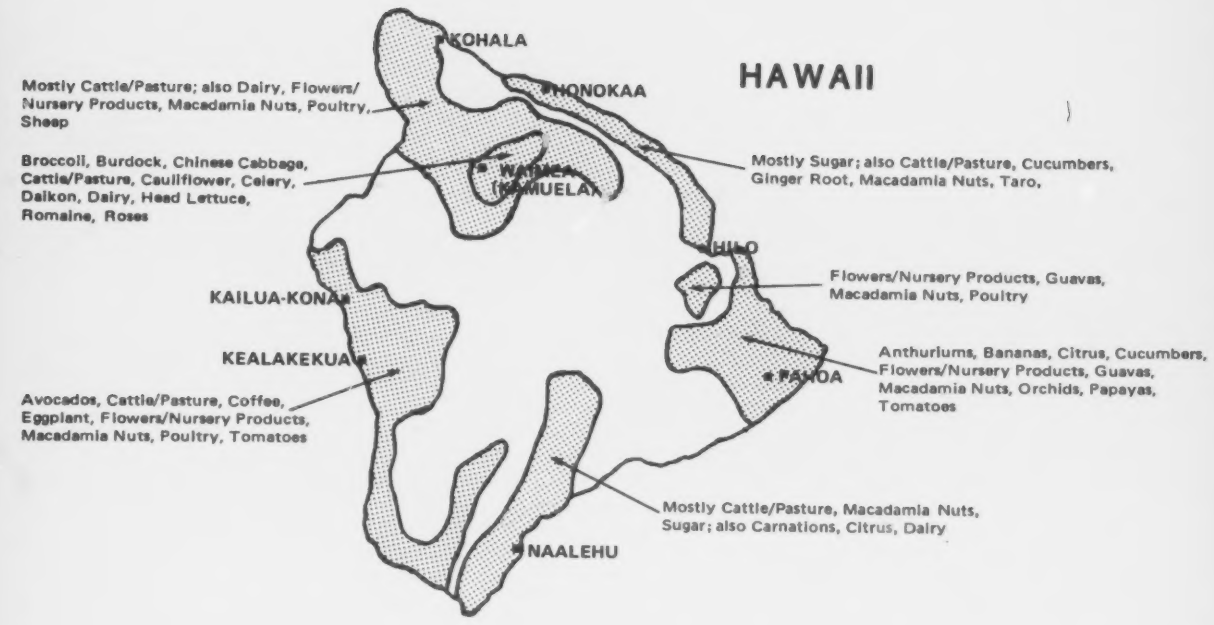
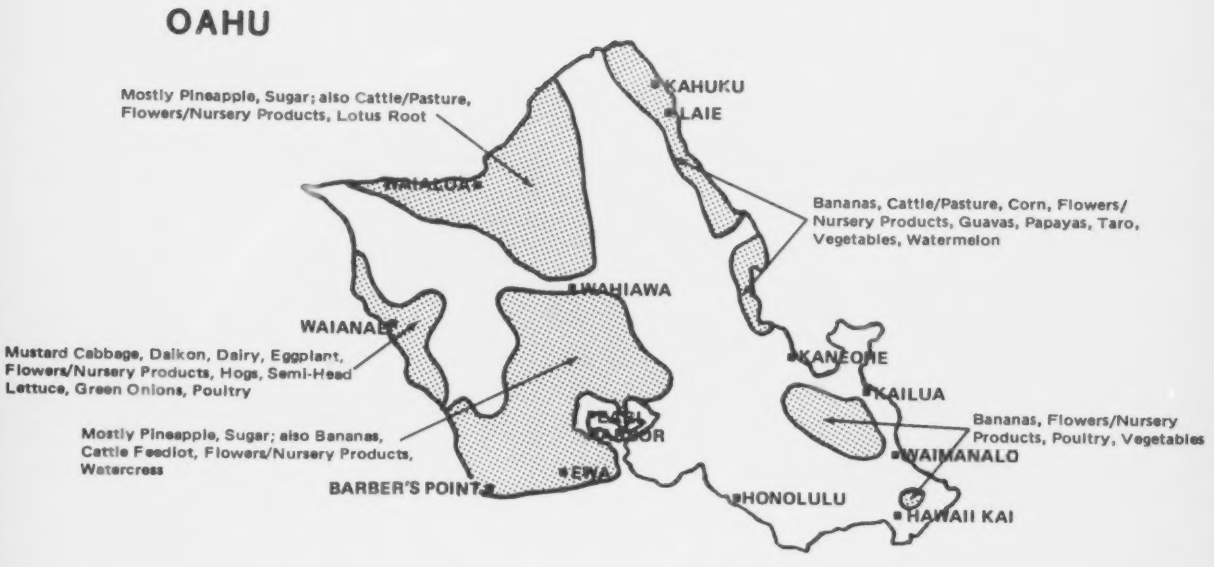
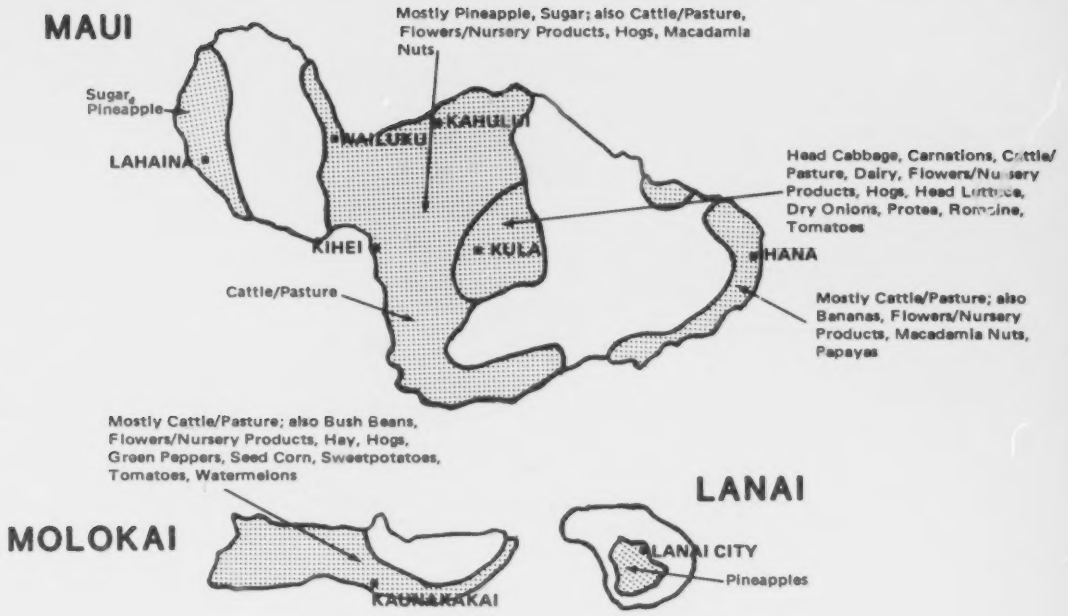
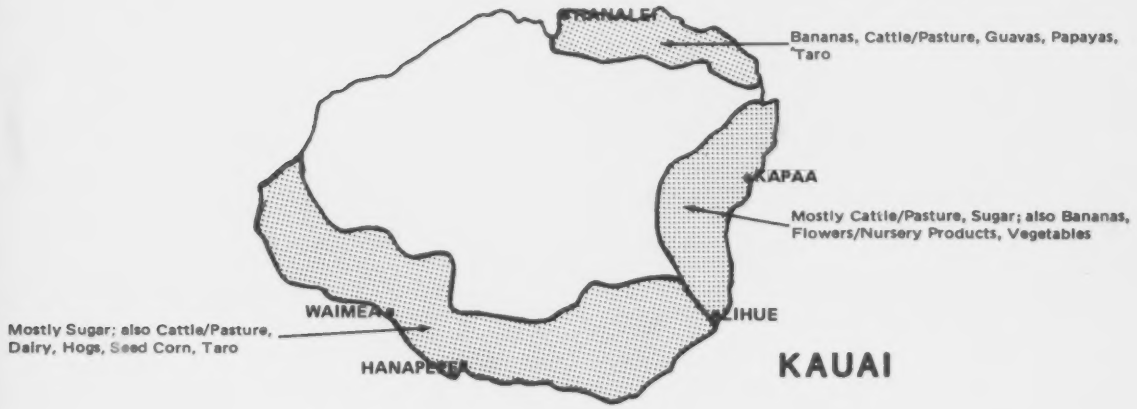
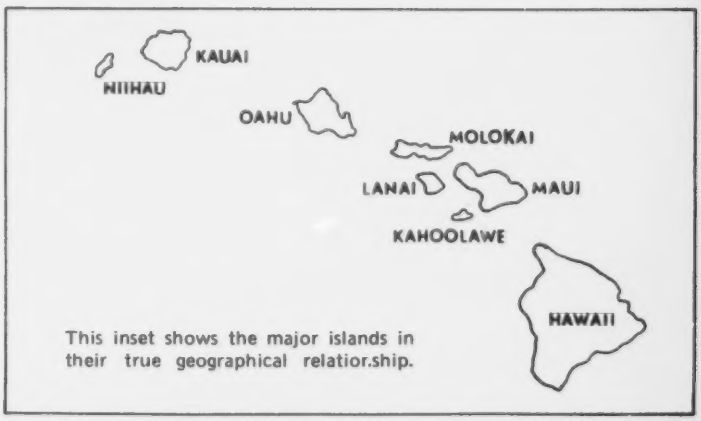
MAJOR AGRICULTURAL AREAS, STATE OF HAWAII, 1989


HAWAII
KOHALA
HONOKAA
WAIMEA (KAMUELA)
HILO
KAILUA-KONA
KEALAKEKUA
PAHOA
NAALEHU
Mostly Cattle/Pasture; also Dairy, Flowers/ Nursery Products, Macadamia Nuts, Poultry, Sheep
Broccoli, Burdock, Chinese Cabbage, Cattle/Pasture, Cauliflower, Celery, Daikon, Dairy, Head Lettuce, Romaine, Roses
Mostly Sugar; also Cattle/Pasture, Cucumbers, Ginger Root, Macadamia Nuts, Taro,
Flowers/Nursery Products, Guavas, Macadamia Nuts, Poultry
Anthuriums, Bananas, Citrus, Cucumbers, Flowers/Nursery Products, Guavas, Macadamia Nuts, Orchids, Papayas, Tomatoes
Avocados, Cattle/Pasture, Coffee, Eggplant, Flowers/Nursery Products, Macadamia Nuts, Poultry, Tomatoes
Mostly Cattle/Pasture, Macadamia Nuts, Sugar; also Carnations, Citrus, Dairy




MAUI
Mostly Pineapple, Sugar; also Cattle/Pasture, Flowers/Nursery Products, Hogs, Macadamia Nuts
Sugar, Pineapple
LAHAINA
WAILUKU
KAHULUI
KIHEI
KULA
HANA
Head Cabbage, Carnations, Cattle/Pasture, Dairy, Flowers/Nursery Products, Hogs, Head Lettuce, Dry Onions, Protea, Romaine, Tomatoes
Cattle/Pasture
Mostly Cattle/Pasture; also Bananas, Flowers/Nursery Products, Macadamia Nuts, Papayas
Mostly Cattle/Pasture; also Bush Beans, Flowers/Nursery Products, Hay, Hogs, Green Peppers, Seed Corn, Sweetpotatoes, Tomatoes, Watermelons
MOLOKAI
KAUNAKAKAI
LANAI
LANAI CITY
Pineapples

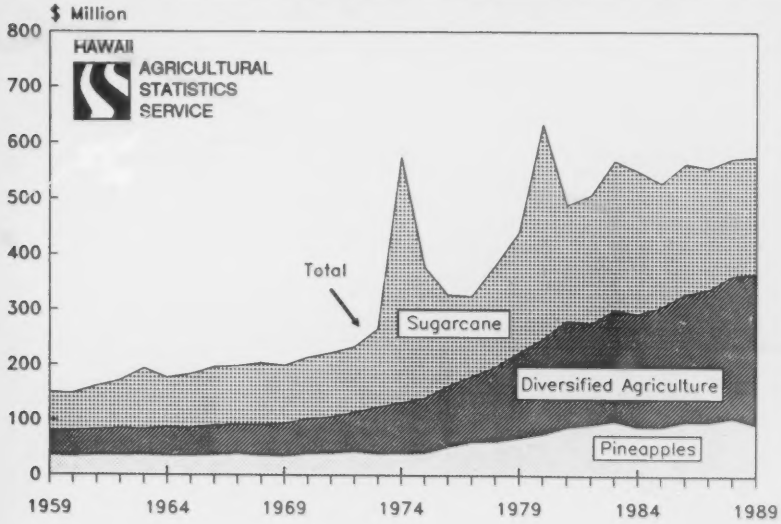

Bananas, Cattle/Pasture, Guavas, Papayas, Taro
KAPAA
Mostly Cattle/Pasture, Sugar; also Bananas, Flowers/Nursery Products, Vegetables
LIHUE
WAIMEA
Mostly Sugar; also Cattle/Pasture, Dairy, Hogs, Seed Corn, Taro
HANAPEPE
KAUAI


KAUAI
NIIHAU
OAHU
MOLOKAI
LANAI
MAUI
KAHOOLAWE
HAWAII
This inset shows the major islands in their true geographical relatior.ship.

30 YEARS OF AGRICULTURE: 1959-1989

In the years since Statehood, the once dominant agricultural sector has been overshadowed by the extraordinary growth of the visitor industry and the increase in Federal government spending. But for the more than 14,000 local citizens whose livelihood is directly intertwined with agriculture, it remains an important part of the economic and social fabric of these islands. The next few pages feature highlights of the last 30 years of agriculture's contribution to our rich Hawaiian history.

FARM VALUE



Sugar and Pineapple remain on top

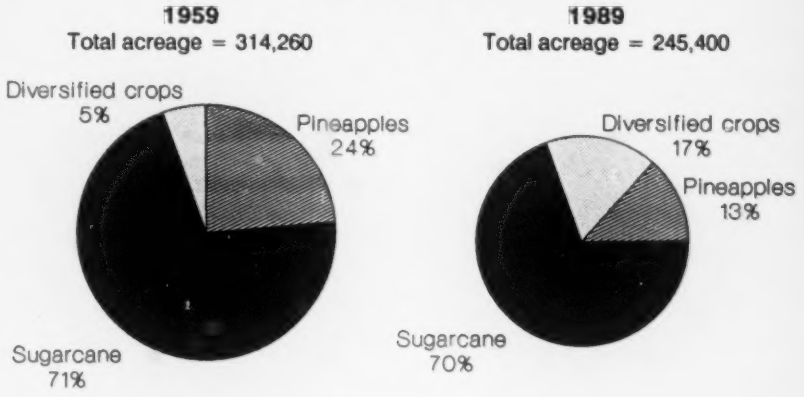
At first glance, some things seem the same--at least on the surface. In 1959, sugarcane and pineapple were the most important agricultural commodities in Hawaii, and the same was true in 1989. However, the 30 years in between saw both industries forced to changes by aggressive foreign competition and pressures from within the State for alternate uses of its valuable agricultural lands. Acreage devoted to both crops have declined largely as a result of these outside forces, but advancements in research and more efficient management by the surviving firms enabled both industries to remain at the forefront of agriculture. Just as sugarcane and pineapple growers had to cope with a changing marketplace, so too did farmers in diversified agriculture. Six of the eight diversified commodities that were ranked in the top ten in 1959 were also on the list 30 years later. But the events of the 60's, 70's, and 80's brought on transformations in agriculture that belied the perceived stability in these rankings.

Farmers expand to markets abroad

Sugarcane and pineapple were successful because they were able to overcome Hawaii's geographic isolation by producing a product that could withstand the 6-day ocean voyage to the U.S. mainland. The perishable nature of other Hawaiian produce, however, tended to limit their marketability to these islands. This would change with the rapid expansion of tourism. Not only were millions of visitors establishing a new consumer base for our unique agricultural products, but the accompanying explosion in airline flights made it feasible for Hawaii farmers to transport perishable items to distant markets in a matter of hours. Many farmers took advantage of these opportunities by

converting abandoned sugarcane lands to the growing of papayas, macadamia nuts, ginger root, and, more recently, coffee. Other farmers began switching from a variety of less profitable crops to join the booming floriculture industry. In time, all of these agricultural segments established successful markets outside of Hawaii. Indeed, a comparison of the top ten commodities of 1959 with that of 1989 shows the impact of an expanded export market. In 1959, only three commodities were being exported in considerable quantities: sugar, pineapples, and coffee. By 1989, these three were joined by floriculture products and macadamia nuts. Moreover, ginger root, papayas, and guavas became important contributors to the growth of their commodity groups.

Cultivated Agricultural Land [1] State of Hawaii



[1] Excludes pasture and grazing land.

HASS

Local production grew, but so have imports

Despite the lure of the export market, some farmers concentrated on attaining a greater share of the in-State market. In 1959, local farmers supplied 48 percent of the fresh produce consumed in the State. During the past 30 years, growers have increased production of these crops by nearly two-thirds. But the overall market share of locally grown produce has slipped to about 33 percent as population growth and imports of large volume items such as fruits and vegetables have increased. With the exception of the egg industry, local livestock operators have also seen their market share slip since 1959 due to the large economies of scale enjoyed by giant mainland firms.

Same challenges lay ahead

The average age of a Hawaii farmer was 53 years old in 1989, a bit older than his 49.5 year old counterpart was in 1959. The goals and challenges they face, however, have changed little. Today's farmer must still search for ways to become more efficient and productive in an already competitive global market. The need also remains to look for crops that will make maximum use of a shrinking land base. But if the past 30 years are any indication, then it has already been demonstrated that Hawaii's farmers will continue to ensure agriculture as more than just a way of life. ■

AGRICULTURE'S TOP TEN

1959

Commodity	Value of production	Percent of total value
	1,000 dollars	
Sugarcane	69,800	46.8
Pineapples	34,900	23.4
Milk	9,884	6.6
Cattle	10,165	6.8
Eggs	5,806	3.9
Vegetables and melons	4,355	2.9
Hogs	3,731	2.5
Coffee	3,488	2.3
Fruits (excluding pineapples)	1,586	1.1
Taro	592	.4

1989

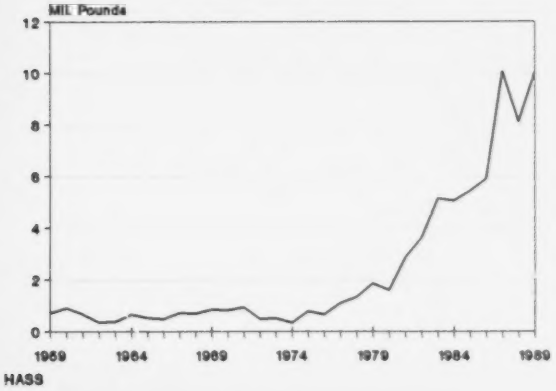
Commodity	Value of production	Percent of total value
	1,000 dollars	
Sugarcane	210,300	36.4
Pineapples	95,448	16.5
Floriculture	62,295	10.8
Macadamia nuts	44,945	7.8
Vegetables and melons	31,671	5.5
Milk	31,588	5.5
Cattle	31,483	5.5
Fruits (excluding pineapples)	23,074	4.0
Eggs	14,949	2.6
Coffee	8,910	1.5

SOME CROPS FLOURISHED. . .

GINGER ROOT

Ginger's roots in Hawaii predated Statehood, but it was not till the mid-seventies that it began to blossom into a major diversified crop. Until 1977, ginger root production fluctuated around 600,000 pounds a year with total farm revenues in the $150,000-$200,000 range. But a growing export market and relatively high farm prices provided a catalyst for the industry's rapid expansion during the 1980's. By 1983, production topped 5 million pounds then doubled to a record 10 million pounds by 1987.

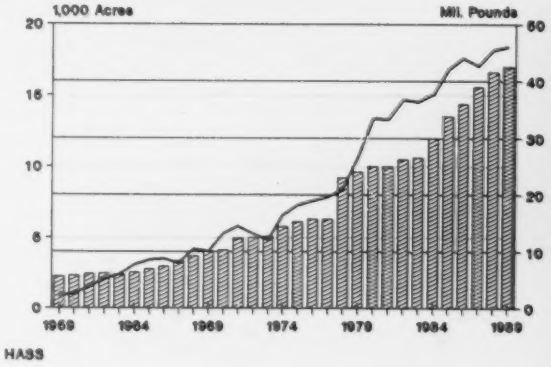
Ginger Root Production



MACADAMIA NUTS

Although this crop has been around since 1881, it was right about the time of Statehood that the macadamia nut industry began to take off. Today, it is the third most important agricultural commodity in the State, exceeded only by sugar and pineapple. In 1989, over 650 growers harvested 18,200 acres to produce a crop of 50.5 million pounds and earn farm level receipts of $44.9 million. This was a dramatic increase from 1959, when 215 growers produced 2.6 million pounds of nuts from 3,515 acres, with a value of less than a half million dollars.

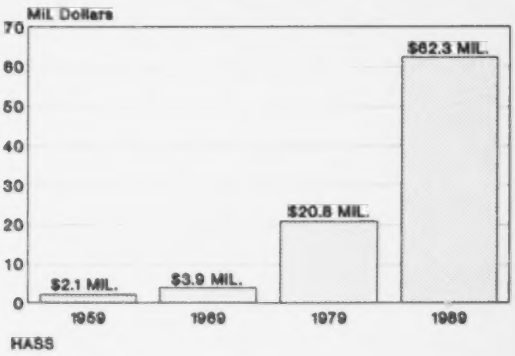
Macadamnia Production and Harvested Acreage



FLORICULTURE

Flowers and nursery products were a fledging industry 30 years ago. In 1959, the value of sales was pegged at $2.1 million. By 1989, it surpassed $62 million, nearly a 30-fold increase. Today, two individual crops within this broad category, anthuriums and potted foliage, are ranked among the State's top 10 principal crops. Literally dozens of different flower and nursery products make up this dynamic industry and the number continues to expand as growers constantly try to satisfy consumer demand for new crops.

Flowers & Nursery Products Value of Sales

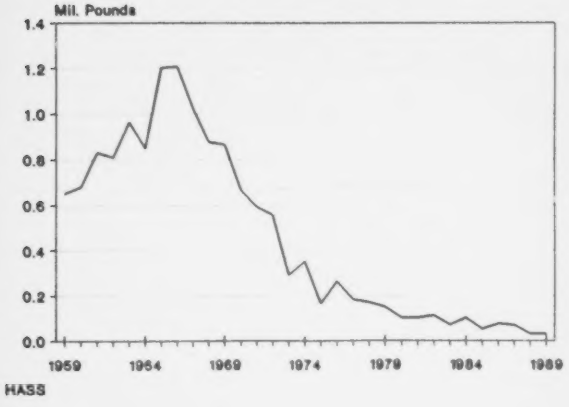


WHILE OTHERS STRUGGLED

TANGERINES

When Hawaii became a State in 1959, the tangerine industry was in the midst of rapid expansion. Production quadrupled during an 11-year period covering 1956 to 1966. At its height, sales topped the million-pound mark in both 1966 and 1967. But as rapidly as the industry expanded, it declined even faster. By 1977, sales dropped to 185,000 pounds and in the last two years have been at a record low 30,000 pounds. Depressed farm prices in the mid-sixties may have started the decline, but the majority of growers simply converted tangerine orchards to the growing of anthuriums.

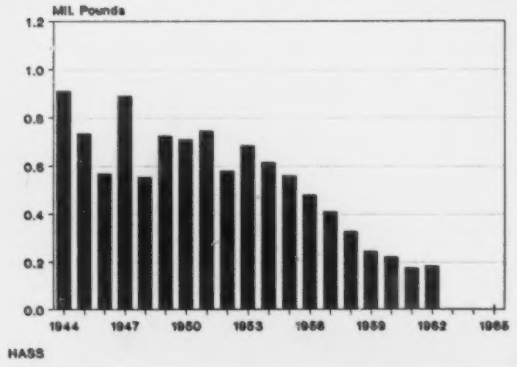
Tangerine Production



RICE

Within Kauai's historic Hanalei Valley lies the restored Haraguchi Rice Mill, a reminder of a time when local rice production once totaled 41.8 million pounds and had a farm value in excess of $1 million. Many factors contributed to the eventual demise of Hawaii's rice industry, but the availability of inexpensive California rice was the major reason. Of the 84.7 million pounds of rice Hawaii imported in 1989, 80 percent came from California and the remainder from Thailand.

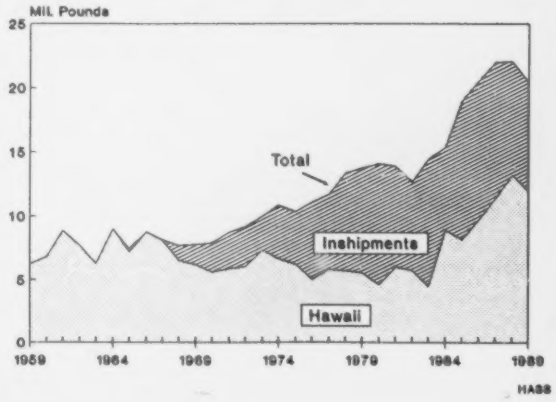
Milled Rice Production



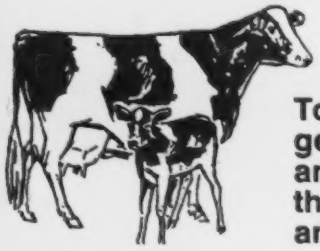
BANANAS

In 1959, Hawaii was still essentially self sufficient in the production of bananas. It was not until the mid-1960's that imports began to supplement local production. As total demand for bananas increased, imports grew rapidly to fill the void created by declining local production. In 14 years, imports achieved a 50 percent share of the total market supply and peaked at 69 percent in 1983. Despite the influx of foreign bananas, Hawaii's farmers have made a dramatic comeback in recent years. Revitalized by the increased demand, a shift in varieties, and new areas of production, local output nearly doubled in 1984 to 8.9 million pounds then hit a record 13.2 million pounds in 1988. Today's banana farmers still face many obstacles, but have begun to reverse the previous downward trend in production.

Banana Market Supply



AGRICULTURE BENEFITS FROM 30 YEARS OF RESEARCH

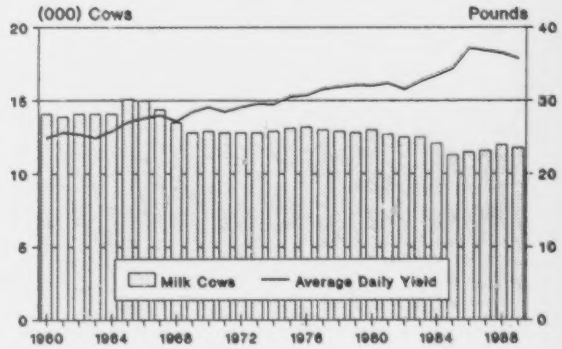


Today's cow is genetically superior and better managed than its 1959 ancestor.

Advancements in genetics, management, and nutrition have helped make Hawaii's milk industry the number one livestock enterprise for the last 6 years and 19 of the past 30 years.

Despite a decline in the total cow herd, Hawaii's overall milk production increased 26 percent from 1960 to 1989. Much of this gain resulted from the introduction of genetically superior Holstein cows, improved feeds, and increased farm efficiency. This is evidenced by the fact that the average annual milk output per cow increased from 24.0 pounds per day in 1960 to 35.8 pounds per day in 1989, a 49 percent increase.

Number of Milk Cows and Average Daily Milk Yield



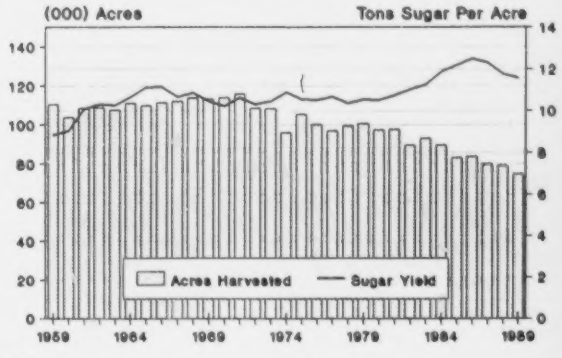
HASS

A united research effort results in Hawaii having the highest sugar yield in the world.

Hawaii's position as the world's leader in the culture of sugarcane is largely the result of a tremendous emphasis on research. The Hawaiian Sugar Planters' Association, a non-profit trade association, was established in 1895 by the plantations to protect, maintain, and advance Hawaii's sugar industry.

The association's largest program is its Experiment Station which conducts research on all aspects of sugarcane cultivation. Through these research efforts, Hawaii's growers were able to increase sugar yields from 8.83 tons per acre in 1959 to a peak of 12.48 tons per acre in 1986. Hawaii's sugar yields are three times higher than anywhere else in the U.S. and more than double that of Australia's, our closest competitor.

Raw Sugar Yield and Acres Harvested



HASS

Comparison of 1959 and 1989 statistics

How has agriculture performed?

Commodity	Production			Average price			Value		
	1959	1989	Percent change	1959	1989	Percent change	1959	1989	Percent change
	— 1,000 tons —			— Dollars per ton —			— 1,000 dollars —		
Pineapples	971	580	- 40	36	165	358	34,900	95,448	173
Sugar (raw 96°)	975	864	- 11	122	363	198	118,600	313,600	164
Fruit and nuts									
	— 1,000 pounds —			— Cents per pound —					
Avocados	1,115	1,100	- 1	6.1	38.0	523	66	418	533
Bananas	6,210	11,900	92	7.1	36.5	414	438	4,344	892
Guavas	2,019	20,900	935	3.6	15.0	317	73	3,135	4,195
Macadamia nuts	2,112	50,500	2,291	18.2	89.0	389	384	44,945	11,604
Papayas	14,395	74,000	414	5.0	19.4	288	714	14,380	1,914
Tangerines	650	30	- 95	12.2	40.0	228	79	12	- 85
Vegetables and melons									
Beans, snap	1,850	1,000	- 46	15.7	83.7	433	290	837	189
Carrots	640	30	- 95	6.1	21.5	252	39	6	- 85
Cabbage, Chinese	2,850	7,700	170	8.4	21.4	155	234	1,648	604
Cabbage, head	8,515	15,750	85	3.0	17.9	497	243	2,819	1,060
Celery	1,140	2,000	75	8.0	26.5	231	90	530	489
Onions, dry	1,940	1,250	- 36	8.7	96.5	1,009	169	1,206	614
Onions, green	795	1,400	76	13.8	97.8	609	110	1,369	1,145
Rice	244	0	--	16.4	0.0	--	40	0	--
Taro [1]	10,200	6,500	- 36	5.8	30.7	429	592	1,996	237
Watercress	3,000	1,250	- 58	12.0	107.7	798	360	1,346	274
Watermelons	3,080	13,500	338	8.0	13.2	65	246	1,782	624
Specialty crops									
Coffee [1]	12,999	2,200	- 83	26.8	405.0	1,411	3,488	8,910	155
Ginger root	730	8,150	1,016	24.4	71.5	193	178	5,827	3,174
Floriculture	--	--	--	--	--	--	2,060	62,295	2,924
Livestock and products									
Honey	329	1,215	269	11.3	44.0	289	33	535	1,521
				Dollars per hundredweight					
Cattle [2]	44,978	64,750	44	22.60	48.60	115	10,165	31,483	210
Hogs [2]	10,903	10,288	- 6	34.20	76.90	125	3,731	7,911	112
Milk	112,000	151,500	35	8.80	20.85	137	9,884	31,588	220
	— Million eggs —			— Cents per dozen —					
Eggs	113.7	226.5	99	61.3	79.2	29	5,806	14,949	157

– = Not applicable.
[1] Pounds based on marketings.
[2] Based on live weight pounds.

HAWAII AGRICULTURE 1989

Nineteen eighty-nine was the second best year ever for Hawaii's agriculture, as farmers realized farm level receipts of $577.1 million, up from $574.0 million the year before. Although it was exceeded only by returns a decade earlier, when high sugar prices pushed the 1980 value to $634.1 million, it was also a year of struggle for some within the agriculture sector. Weather was probably the most important single factor affecting crop yields and production as rainfall and cloudy conditions hampered yields and quality of several major crops. Despite lower than expected sugar production, higher prices pushed the equivalent farm level receipts (the value of cane before processing) to $210.3 million, up slightly from $209.9 million in 1988. Pineapple, the State's second leading crop, experienced a $12.0 million drop in the equivalent farm value to $95.4 million due to the combined effects of reduced output caused by the weather and lower prices. Diversified agriculture (everything except sugar and pineapple) continued to grow with record cash receipts of $271.4 million, increasing 6 percent from the previous year and accounting for 47 percent of the total farm value of agriculture. Highlighting this sector were increased returns from the sales of flowers and nursery products, macadamia nuts, coffee, fruits (other than pineapple) and beef cattle. The value of agriculture including the contributions of sugar and pineapple processing was $835.6 million, 1 percent greater than 1988. Value data beyond the farm level for commodities other than sugar and pineapple are not available.

SUMMARY: Acreage in crop and total farm acreage, by islands, 1985-89

Year	Sugarcane	Pineapples [1]	Vegetables and melons [2]	Fruits (excluding pineapples)	Coffee	Macadamia nuts	Miscellaneous crops [3]	Total farm acreage [4]
				1,000 acres				
				STATE [5]				
1985.....	187.9	34.5	5.4	6.5	2.1	20.9	8.5	1,800
1986.....	184.3	36.0	5.4	6.8	2.3	21.2	5.2	1,750
1987.....	181.1	36.1	5.6	7.0	2.4	21.5	6.0	1,720
1988.....	176.5	34.6	5.2	7.6	2.6	21.9	7.4	1,720
1989....	**170.8**	**32.7**	**5.0**	**7.4**	**2.3**	**22.3**	**4.9**	**1,720**
				HAWAII				
1985.....	69.9		2.0	4.8	2.1	19.1	3.2	1,050
1986.....	69.1		1.9	5.2	2.3	19.4	2.7	1,035
1987.....	68.5		1.9	5.3	2.4	19.5	2.8	1,010
1988.....	66.7		1.8	5.9	2.6	[6]	3.1	1,010
1989....	**63.1**		**1.7**	**5.8**	**2.3**	**[6]**	**2.5**	**1,010**
				KAUAI/NIIHAU				
1985.....	43.7	*	.1	.9		[6]	.6	245
1986.....	43.2	*	.1	.8		[6]	.6	230
1987.....	43.0	*	.1	.8		[6]	.7	225
1988.....	41.9	*	.1	.7		[6]	.8	225
1989....	**40.9**	*	**.1**	**.7**		**[6]**	**.7**	**225**
				MAUI/MOLOKAI/LANAI				
1985.....	47.2	23.0	1.9	.1		[6]	4.1	380
1986.....	46.1	24.0	2.0	.1		[6]	1.2	360
1987.....	43.9	23.7	2.2	.1		[6]	1.7	360
1988.....	42.2	21.3	2.3	.1		[6]	1.9	360
1989....	**42.5**	**19.7**	**2.4**	**.1**		**[6]**	**1.0**	**360**
				OAHU				
1985.....	27.1	11.5	1.4	.7		[6]	.6	125
1986.....	25.9	12.0	1.4	.7		[6]	.7	125
1987.....	25.7	12.4	1.4	.8		[6]	.8	125
1988.....	25.7	13.3	1.0	.9		[6]	1.6	125
1989....	**24.3**	**13.0**	**.8**	**.8**		**[6]**	**.7**	**125**

* = Less than 500 acres.
[1] Land used for pineapple.
[2] Harvested acreage.
[3] Includes taro, seed corn, feed and forage crops (excluding pineapple feed products), and flowers, foliage and nursery products.
[4] Includes land not in crop and pasture such as farm house lots, roads, woodlots, etc.
[5] Sum of island estimates may not add to State total due to rounding.
[6] Island data not shown separately to avoid disclosure of individual operations but combined and included in the State total.

SUMMARY: Number of crop farms, by islands, 1985-89

Year	Sugar	Pineapples	Vegetables and melons	Fruits (excluding pineapples)	Coffee	Macadamia nuts	Taro	Flowers and nursery products
				STATE				
1985	155	18	715	805	620	610	155	675
1986	120	19	750	793	620	645	140	635
1987	100	12	660	774	630	650	140	670
1988	75	12	575	775	635	660	155	675
1989	**70**	**10**	**525**	**709**	**635**	**660**	**150**	**710**
				HAWAII				
1985	144		340	535	620	600	72	310
1986	109		400	531	620	630	65	300
1987	89		344	518	630	630	68	320
1988	64		290	526	635	640	92	325
1989	**60**		**280**	**497**	**635**	**640**	**87**	**320**
				KAUAI				
1985	5	3	60	80		4	48	30
1986	5	3	48	78		5	50	25
1987	5	3	38	70		8	46	30
1988	5	3	35	67		8	42	35
1989	**5**	**3**	**25**	**55**		**8**	**45**	**50**
				MAUI/MOLOKAI/LANAI				
1985	3	13	75	45		3	23	85
1986	3	14	85	47		7	20	75
1987	3	7	92	43		9	19	90
1988	3	7	90	43		9	14	85
1989	**2**	**5**	**83**	**35**		**9**	**16**	**110**
				OAHU				
1985	3	2	240	145		3	12	250
1986	3	2	217	137		3	5	235
1987	3	2	186	143		3	7	230
1988	3	2	160	139		3	7	230
1989	**3**	**2**	**137**	**122**		**3**	**2**	**230**

SUMMARY: Number of livestock operations and total number of farms, by islands, 1986-89 [1]

Year	Cattle [2]	Hogs	Milk	Eggs	Broilers	Honey	Total (non-duplicated) [3]
				STATE			
1985	[4] 950	650	90	55	7	22	4,600
1986	[4] 900	600	90	55	8	20	4,600
1987	[4] 900	600	90	55	8	14	4,650
1988	900	600	90	55	8	12	4,650
1989	**900**	**550**	**80**	**55**	**8**	**11**	**4,650**
				HAWAII			
1985	[4]470	85	41	24		7	2,650
1986	[4] 440	80	41	25		6	2,700
1987	[4] 465	80	41	25		4	2,700
1988	450	80	41	25		4	2,700
1989	**440**	**90**	**41**	**25**		**4**	**2,700**
				KAUAI/NIIHAU			
1985	[4] 170	120	13	4	1	8	375
1986	160	110	13	4	1	7	400
1987	170	120	13	4	1	5	400
1988	170	120	13	4	1	3	400
1989	**170**	**100**	**12**	**4**	**1**	**2**	**400**
				MAUI/MOLOKAI/LANAI			
1985	[4] 220	110	16	7		4	550
1986	[4] 210	100	16	7		4	550
1987	[4] 185	100	16	7		3	600
1988	200	100	16	7		4	600
1989	**210**	**90**	**7**	**7**		**4**	**600**
				OAHU			
1985	[4] 90	335	20	20	6	3	1,025
1986	[4] 90	310	20	19	7	3	950
1987	[4] 80	300	20	19	7	2	950
1988	80	300	20	19	7	1	950
1989	**80**	**270**	**20**	**19**	**7**	**1**	**950**

[1] End of year.
[2] Includes beef, dairy, and dairy replacement operations.
[3] Based on farm definition of $1,000 or more of agricultural sales.
[4] Revised.

SUMMARY: Volume of crop marketings, by islands, 1985-89

Year	Sugar (unprocessed cane)	Pineapples (fresh equivalent)	Vegetables and melons	Fruits (excluding pineapples)	Coffee (parchment)	Macadamia nuts (in shell)	Taro
	1,000 tons		1,000 pounds				
				STATE [1]			
1985	7,916	565	89,730	80,980	1,850	42,000	6,860
1986	8,379	646	92,000	90,610	3,000	44,000	6,330
1987	8,014	692	95,330	99,330	1,800	42,700	6,300
1988	7,606	659	92,730	104,870	2,000	45,500	6,800
1989	**7,082**	**580**	**81,700**	**109,980**	**2,200**	**50,500**	**6,500**
				HAWAII			
1985	2,686		37,150	64,030	1,850	41,400	1,010
1986	2,797		33,360	68,110	3,000	43,350	840
1987	2,566		37,220	76,240	1,800	41,300	1,280
1988	2,300		33,420	83,960	2,000	[2]	1,530
1989	**2,130**		**30,470**	**89,190**	**2,200**	[2]	**1,620**
				KAUAI			
1985	1,802	*	1,690	10,430		[2]	4,780
1986	1,977	*	1,650	14,600		[2]	4,490
1987	1,912	*	1,060	15,520		[2]	4,170
1988	2,009	*	990	12,770		[2]	4,410
1989	**1,819**	*	**505**	**13,020**		[2]	**4,160**
				MAUI/MOLOKAI/LANAI			
1985	2,208	358	35,670	1,260		[2]	[2]
1986	2,251	415	40,620	1,340		[2]	[2]
1987	2,236	444	42,140	1,250		[2]	[2]
1988	2,128	388	46,570	1,290		[2]	[2]
1989	**1,925**	**345**	**41,495**	**1,020**		[2]	[2]
				OAHU			
1985	1,220	207	15,220	5,260		[2]	[2]
1986	1,354	231	16,370	6,560		[2]	[2]
1987	1,300	248	14,910	6,320		[2]	[2]
1988	1,169	271	11,750	6,850		[2]	[2]
1989	**1,208**	**235**	**9,230**	**6,750**		[2]	[2]

* = Less than 500 tons.

[1] Sum of island estimates may not add to State total due to rounding of State estimates to 1,000 hundredweight of some crops included in United States totals.

[2] Island data not shown separately to avoid disclosure of individual operations but combined and included in the State total.

SUMMARY: Volume of livestock marketings, by islands, 1985-89

Year	Beef (dressed weight) [1]	Pork (dressed weight)	Milk	Eggs	Broilers and chickens (ready-to-cook weight)	Honey
	1,000 pounds		Million pounds	Million	1,000 pounds	
			STATE [2]			
1985	33,928	7,859	139.8	220.5	7,706	1,188
1986	33,764	8,643	153.1	227.0	7,629	1,323
1987	34,335	8,431	153.7	223.3	7,988	1,710
1988	31,403	8,217	157.1	224.4	7,994	1,611
1989	**34,450**	**7,716**	**151.5**	**226.5**	**7,967**	**1,215**
			HAWAII			
1985	21,824	700	[3]	[3]	[3]	[3]
1986	22,500	748	[3]	[3]	[3]	[3]
1987	25,718	688	[3]	[3]	[3]	[3]
1988	26,188	564	[3]	[3]	[3]	[3]
1989	**28,882**	**559**	[3]	[3]	[3]	[3]
			KAUAI/NIIHAU			
1985	2,118	689	[3]	[3]	[3]	[3]
1986	2,099	990	[3]	[3]	[3]	[3]
1987	1,923	1,045	[3]	[3]	[3]	[3]
1988	1,227	1,062	[3]	[3]	[3]	[3]
1989	**1,326**	**942**	[3]	[3]	[3]	[3]
			MAUI/MOLOKAI			
1985	8,447	1,803	[3]	[3]	[3]	[3]
1986	8,175	1,798	[3]	[3]	[3]	[3]
1987	5,219	1,780	[3]	[3]	[3]	[3]
1988	3,229	1,921	[3]	[3]	[3]	[3]
1989	**3,058**	**1,871**	[3]	[3]	[3]	[3]
			OAHU			
1985	1,539	4,667	107.0	186.4	[3]	[3]
1986	989	5,107	116.5	189.7	[3]	[3]
1987	1,475	4,918	115.6	179.8	[3]	[3]
1988	759	4,670	120.7	180.9	[3]	[3]
1989	**1,184**	**4,344**	**116.3**	**183.8**	[3]	[3]

[1] Includes slaughter cattle but excludes calves shipped out-of-State.
[2] State totals may not add due to rounding.
[3] Island data not shown separately to avoid disclosure of individual operations but combined and included in the State total.

SUMMARY: Value of crop sales, by islands, 1985-89

Year	Sugar (unprocessed cane)	Pineapples (fresh equivalent)	Vegetables and melons	Fruits (excluding pineapples)	Coffee (parchment)
			1,000 dollars		
			STATE		
1985	222,400	90,530	30,334	12,794	5,180
1986	233,800	99,720	30,267	16,606	8,700
1987	218,000	99,286	30,556	17,431	4,860
1988	209,900	107,402	30,917	20,576	6,600
1989	**210,300**	**95,448**	**31,671**	**23,074**	**8,910**
			HAWAII		
1985	69,800		12,549	9,284	5,180
1986	74,100		11,988	12,381	8,700
1987	64,400		12,074	13,064	4,860
1988	60,000		13,035	16,184	6,600
1989	**56,900**		**13,671**	**18,377**	**8,910**
			KAUAI		
1985	53,300	*	608	1,697	
1986	54,000	*	604	2,112	
1987	51,200	*	435	2,327	
1988	51,800	*	359	2,083	
1989	**51,500**	*	**216**	**2,222**	
			MAUI/MOLOKAI/LANAI		
1985	63,600	36,380	9,966	255	
1986	67,500	45,540	10,156	311	
1987	66,900	46,366	11,110	295	
1988	66,200	39,141	11,080	315	
1989	**66,400**	**32,863**	**11,615**	**326**	
			OAHU		
1985	35,700	54,150	7,211	1,558	
1986	38,200	54,180	7,519	1,802	
1987	35,500	52,920	6,937	1,745	
1988	31,900	68,261	6,443	1,994	
1989	**35,500**	**62,585**	**6,169**	**2,149**	

See footnotes at end of table.

Continued

SUMMARY: Value of crop sales, by islands, 1985-89 -- Continued

Year	Macadamia nuts (in shell)	Taro	Field crops (not estimated separately) [1]	Flowers and nursery products [2]	Total crops [3]
			1,000 dollars		
			STATE		
1985	30,450	1,578	8,198	44,162	445,826
1986	35,200	1,462	6,225	49,132	481,312
1987	35,868	1,676	6,947	54,731	469,565
1988	40,950	1,904	7,243	59,551	485,293
1989	**44,945**	**1,996**	**6,441**	**62,295**	**485,330**
			HAWAII		
1985	30,015	290	2,615	19,605	149,523
1986	34,680	236	909	22,797	165,976
1987	34,527	452	651	23,668	153,891
1988	[4]	534	607	29,036	165,619
1989	[4]	**591**	**275**	**29,038**	**170,713**
			KAUAI		
1985	[4]	1,032	1,716	1,179	59,554
1986	[4]	1,010	1,558	1,146	60,452
1987	[4]	1,017	2,205	1,235	58,464
1988	[4]	1,155	2,669	1,949	60,073
1989	[4]	**1,211**	**2,482**	**2,378**	**60,056**
			MAUI/MOLOKAI/LANAI		
1985	[4]	[4]	3,487	5,188	119,484
1986	[4]	[4]	3,229	5,244	132,647
1987	[4]	[4]	3,319	6,663	136,126
1988	[4]	[4]	3,208	7,162	128,778
1989	[4]	[4]	**2,989**	**7,756**	**124,287**
			OAHU		
1985	[4]	[4]	380	18,190	117,265
1986	[4]	[4]	529	19,945	122,237
1987	[4]	[4]	772	23,165	121,084
1988	[4]	[4]	759	21,404	130,823
1989	[4]	[4]	**695**	**23,123**	**130,274**

* = Less than $50,000.

[1] Forage and grain crops.

[2] Flowers, foliage, and nursery products.

[3] Total crop values shown for individual islands are actual. Sum of individual commodities may not add to total. Forest product's value combined and included in total crop value.

[4] Island data not shown separately to avoid disclosure of individual operations but combined and included in the State total.

SUMMARY: Value of livestock sales, total value of crop and livestock sales, and government payments, by islands, 1985-89

Year	Cattle [1]	Hogs [1]	Milk	Eggs	Broilers and chickens	Other [2]	Total livestock [3]	Total crops and livestock	Government payments [4]
					1,000 dollars				
					STATE				
1985	26,632	7,995	28,310	14,020	4,895	971	82,823	528,649	1,184
1986	24,645	8,770	30,605	13,450	4,744	1,191	83,405	564,717	2,810
1987	27,401	8,509	31,201	14,291	5,119	1,212	87,733	557,298	344
1988	27,984	8,381	32,190	13,801	5,110	1,203	88,669	573,962	465
1989	**31,483**	**7,911**	**31,588**	**14,949**	**4,793**	**1,045**	**91,769**	**577,099**	**396**
					HAWAII				
1985	16,870	760	[5]	[5]	[5]	662	22,122	171,645	508
1986	16,385	778	[5]	[5]	[5]	742	21,982	187,958	204
1987	20,535	707	[5]	[5]	[5]	814	26,415	180,306	240
1988	23,274	590	[5]	[5]	[5]	682	29,060	194,679	303
1989	**26,711**	**603**	[5]	[5]	[5]	**628**	**32,695**	**203,408**	**302**
					KAUAI/NIIHAU				
1985	1,860	758	[5]	[5]	[5]	117	5,071	64,625	44
1986	1,734	1,069	[5]	[5]	[5]	216	5,229	65,681	20
1987	1,625	1,114	[5]	[5]	[5]	193	5,073	63,537	17
1988	1,021	1,140	[5]	[5]	[5]	260	4,761	64,834	12
1989	**1,197**	**1,030**	[5]	[5]	[5]	**194**	**4,760**	**64,816**	**12**
					MAUI/MOLOKAI/LANAI				
1985	6,820	1,935	[5]	[5]	[5]	149	12,215	131,699	598
1986	5,926	1,918	[5]	[5]	[5]	181	11,751	144,398	2,563
1987	4,317	1,934	[5]	[5]	[5]	153	10,591	146,717	57
1988	3,128	2,074	[5]	[5]	[5]	205	9,163	137,941	80
1989	**2,594**	**2,021**	[5]	[5]	[5]	**170**	**8,258**	**132,545**	**51**
					OAHU				
1985	1,082	4,542	21,710	11,477	[5]	43	43,415	160,680	34
1986	600	5,005	23,358	11,022	[5]	52	44,443	166,680	23
1987	924	4,754	23,895	11,282	[5]	52	45,654	166,738	30
1988	561	4,577	24,912	10,865	[5]	56	45,685	176,508	70
1989	**981**	**4,257**	**24,481**	**11,871**	[5]	**53**	**46,056**	**176,330**	**31**

[1] Excludes interfarm sales; includes out-of-State sales of slaughter cattle and feeder calves.

[2] Includes sheep, wool, turkeys, horses, honey, and beeswax.

[3] Sum of individual commodities may not add to total.

[4] Includes all government payments, such as Agricultural Conservation Program, Cattle Indemnity Payment Program, Dairy Indemnity Payment Program, Emergency Conservation Program, Forestry Incentives Program, Emergency Feed Program, wool payments, and sugar support.

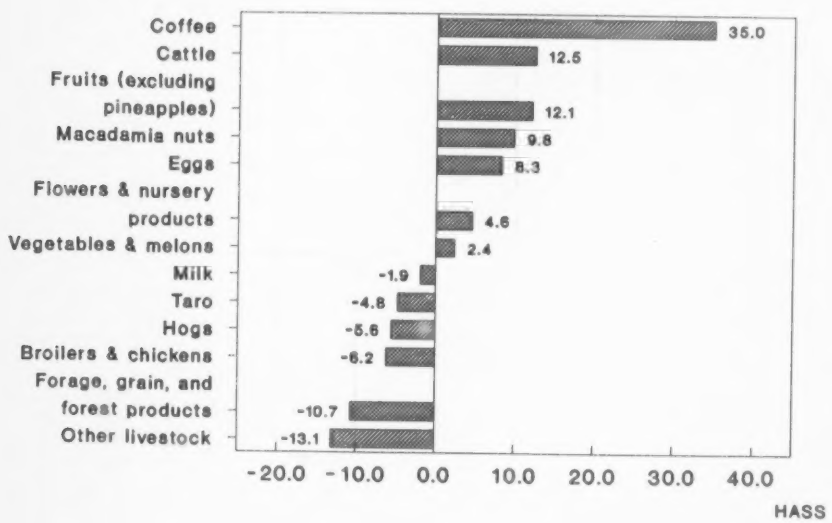
[5] Island data not shown separately to avoid disclosure of individual operations but combined and included in State total.

DIVERSIFIED AGRICULTURE SUMMARY

Diversified agriculture ranked by value, State of Hawaii, 1987-89

Crops	Rank			Value of production			Percent of diversified agriculture		
	1987	1988	1989	1987	1988	1989	1987	1988	1989
	Number			1,000 dollars			Percent		
Flowers and nursery products	1	1	1	54,731	59,551	**62,295**	22.8	23.2	**22.9**
Macadamia nuts	2	2	2	35,868	40,950	**44,945**	14.9	16.0	**16.6**
Vegetables and melons	4	4	3	30,556	30,917	**31,671**	12.7	12.0	**11.7**
Milk	3	3	4	31,201	32,190	**31,588**	13.0	12.5	**11.6**
Cattle	5	5	5	27,401	27,984	**31,483**	11.4	10.9	**11.6**
Fruits (excluding pineapples)	6	6	6	17,431	20,576	**23,074**	7.3	8.0	**8.5**
Eggs	7	7	7	14,291	13,801	**14,949**	6.0	5.4	**5.5**
Coffee	11	10	8	4,860	6,600	**8,910**	2.0	2.6	**3.3**
Hogs	8	8	9	8,509	8,381	**7,911**	3.6	3.3	**2.9**
Forage, grain, and forest products	9	9	10	7,157	7,493	**6,691**	3.0	2.9	**2.5**
Broilers and chickens	10	11	11	5,119	5,110	**4,793**	2.1	2.0	**1.8**
Taro	12	12	12	1,676	1,904	**1,996**	.7	.7	**.7**
Other livestock	13	13	13	1,212	1,203	**1,045**	.5	.5	**.4**
Total				240,012	256,660	**271,351**	100.0	100.0	**100.0**

DIVERSIFIED AGRICULTURE: Percent Change in Value of Production, 1988-89, State of Hawaii



CROP PERFORMANCES MIXED BY WEATHER DURING 1989

• *SUGAR*

Raw sugar production hit a 31-year low of 864,000 tons in 1989, down 7 percent from the previous year. A 5 percent decline in harvested acreage and wetter-than-normal weather conditions were the primary reasons for the drop in last year's output. Raw sugar prices, on the other hand, rose for the second straight year and averaged $363 per ton in 1989. The higher raw sugar prices did offset the decline in output enabling the industry to increase fractionally the total value of raw sugar to $313.6 million.

• *PINEAPPLES*

The 1989 pineapple crop totaled 580,000 tons, fresh weight, down 12 percent from 1988. Weather was the main culprit in reducing production to the lowest level since 1985. An unusually wet year reduced yields and affected the size and quality of the crop. Total pineapple acreage declined 1,900 acres from the previous year to 32,700 in 1989. The lower acreage was not given as the reason for the lower 1989 production, but will undoubtedly have some influence on future output. Growers received lower average prices for their fruit in 1989, compared with the previous year. The equivalent farm value of the 1989 crop was $95.4 million, down from $107.4 million the year before.

• *FLORICULTURE*

Wholesale sales of **FLOWERS AND NURSERY PRODUCTS** topped $62.0 million in 1989, 5 percent more than 1988. **FOLIAGE SALES**, although still the leading category with $18.2 million in sales, slipped 9 percent from last year. **CUT FLOWERS** remained second with receipts of $17.2 million despite continued production losses of anthuriums due to bacterial blight. The broad category of **ALL OTHER NURSERY PRODUCTS**, which includes ornamentals and trees for landscaping, bedding plants, plant rentals, and other nursery products not elsewhere classified, registered a 46 percent increase and ranked third with sales totaling $10.5 million. The value of **ORCHID** sales totaled a record $8.4 million, 17 percent higher than 1988. Sales of **LEI FLOWERS and individual blooms** remained unchanged from the previous year at $4.6 million. Sales of **POTTED FLOWERING PLANTS** increased 11 percent over 1988 to total $3.4 million.

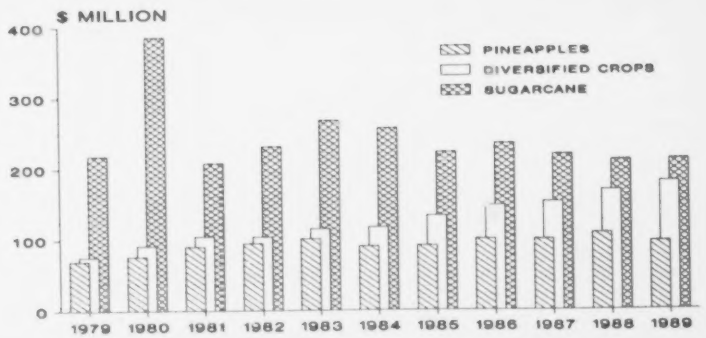
• *MACADAMIA NUTS*

The 1989-90 Hawaii macadamia nut crop was pegged at a record high 50.5 million pounds (wet in-shell). Despite the record crop, which was 11 percent larger than the previous year, it would have been greater if weather had not adversely affected yields in some localities. More bearing acreage and another year of maturity for the younger orchards are the principal reasons for the increased production. A record 18,200 acres were harvested with virtually all of the increase in bearing acres occurring on Hawaii. An additional 400 acres were planted during 1989, the same amount as the previous year, boosting the total in crop Statewide to 22,300. Growers received an average of 89.0 cents a pound, net, wet in-shell, for the 1989-90 crop, down slightly from the 1988-89 average of 90.0 cents. Despite a slight drop in the average price per pound received, the increase in production boosted the total farm level value to a record $44.9 million for the 1989-90 crop.

• *VEGETABLES AND MELONS*

Vegetable and melon farmers generated record revenues of $31.7 million in 1989, up 2 percent from 1988. Record farm prices were responsible for the overall increase in farm receipts as production fell for the second consecutive year. **GINGER ROOT** once again led all other vegetables and melons with farm revenues of $5.8 million, up 16 percent from 1988. The farm value of **TOMATOES** decreased 10 percent and at $3.0 million it remained a distant second. Overall, the same 10 crops and the combined category of other vegetables and melons that topped $1.0 million in farm

VALUE OF CROP SALES STATE OF HAWAII, 1979-89



revenues during 1988 did so again in 1989. Production of vegetables and melons totaled 81.7 million pounds in 1989, down 12 percent from 1988. Reductions in harvested acreage, wetter-than-normal weather, and disease were major reasons why a majority of the vegetable crops experienced a decline in output. **HEAD CABBAGE** farmers regained the top volume spot with a record harvest of 15.8 million pounds, up 1 percent from the previous year. **WATERMELONS** declined to second place on a volume of 13.5 million pounds, down 29 percent or 5.4 million pounds from 1988's record output. **GINGER ROOT** moved up a rank to third with a preliminary estimate of 8.2 million pounds, up 1 percent from 1988. A majority of the remaining vegetables suffered a drop in output during 1989 with some notable declines being registered by **CHINESE CABBAGE** (-7%), **TOMATOES** (-21%), **CUCUMBERS** (-11%), **LETTUCES** (-27%), **DRY ONIONS** (-12%), and **SWEETPOTATOES** (-19%). Vegetables that posted increases in production mainly did so as a result of increased acreage. In most cases the rise in output was moderate, but **SWEET CORN** was an exception with an increase in output of 55 percent to 1.0 million pounds.

- *FRUITS*

Production of diversified fruits (excludes pineapples) totaled 110.0 million pounds, up 5 percent from 1988. Farm revenues totaled $23.1 million, up 12 percent from 1988. Fresh **PAPAYA** utilization totaled 64.0 million pounds in 1989, up 12 percent from 1988 and second only to 1984's record 67.0 million pounds. A 9 percent increase in harvested acres to 2,500 acres was the major reason for the increase in output as yields dropped 1 percent. A record 20.9 million pounds of **GUAVA** were processed in 1989, up 10 percent from 1988 and more than twice the amount processed just 5 years earlier. An increase in harvested acreage and additional laborers in areas that were shorthanded the previous year were major reasons for the boost in total output. Fresh prices averaged a record 15.0 cents per pound in 1989 enabling growers to rake in a record $3.1 million in revenues. **BANANA** sales totaled 11.9 million pounds during 1989, down 10 percent from a revised 1988 estimate of 13.2 million pounds. Most of the reduction in output was due to a 7 percent decline in harvested acreage. Economic abandonment, a switching of varieties, and disease were the main reasons for the drop

in harvested acreage. Farm prices climbed 11 percent to a record high 36.5 cents per pound in 1989 in response to lower local supplies and higher prices for imported bananas.

- *TARO*

Farmers harvested 6.5 million pounds of taro in 1989, down 4 percent from 1988. Much of 1989's downturn in production can be attributed to a wetter-than-normal year in the major growing areas which caused periodic flooding of patches. The worst of these was a major flood in the Big Island's Waipio Valley in April which severely damaged numerous patches. As a consequence, supplies were low for several months. Statewide yields were also suppressed by cloudy conditions, disease, and detrimental cultural practices. Combined farm prices for poi and Chinese taro averaged a record high 30.7 cents per pound in 1989, up 10 percent from the previous year.

- *COFFEE*

Coffee production during the 1989-90 season is estimated to total 2.2 million pounds (parchment basis), up 10 percent from the previous season. A number of factors aided production, but the most significant was the presence of heavier and more frequent showers during the spring of 1989 than during the same period the previous two years. The increased rainfall improved flowering and fruit setting thereby ensuring a higher yield despite a subsequent dry spell. Production also got a boost from an increase in bearing orchards to 2,300 acres and a record farm price of $4.05 per pound (parchment equivalent) which encouraged farmers to thoroughly harvest their fields in order to maximize revenues.

TOP CROPS

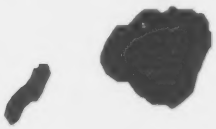
Principal crops ranked by value, State of Hawaii, 1988-89

Crops	Rank		Value of production		Percent of all crops	
	1988	1989	1988	1989	1988	1989
	-- Number --		---- 1,000 dollars -----		--- Percent ----	
Sugarcane	1	1	209,900	210,300	43.3	43.3
Pineapples	2	2	107,402	95,448	22.1	19.7
Macadamia nuts	3	3	40,950	44,945	8.4	9.3
Potted foliage plants	4	4	12,424	14,575	2.6	3.0
Papayas	5	5	12,354	14,380	2.5	3.0
Coffee	7	6	6,600	8,910	1.4	1.8
Anthuriums	6	7	8,022	7,811	1.7	1.6
Seed corn	8	8	6,440	6,120	1.3	1.3
Ginger root	9	9	5,022	5,827	1.0	1.2
Bananas	11	10	4,356	4,344	.9	.9

1989 WEATHER REVIEW

January - March

Except for the middle of the month, January had mostly favorable weather for crop growth. Sunny skies early in the month were followed by heavy showers and gusty winds up to 35 mph. However, the last two weeks experienced favorable weather which allowed crops to make fair to good progress. A cold front brought heavy rains and chilly temperatures through the first half of February. A week long respite of clear, sunny skies was followed by wet, windy weather which



closed out the month. March continued to have cold, wet weather through the first week; however, skies cleared by the second week and conditions remained favorable for crop growth the remainder of the month. Farmers used this period to catch up on chores delayed by the previously adverse weather.

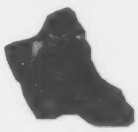
April - June

Vegetables and melons made fair to good progress under variable weather conditions during April. Unseasonably heavy showers early in the month drenched most of the State and caused minor flooding and washouts. Although no major crop losses occurred, farming activities were hindered by muddy field conditions. Weather conditions in leeward areas became mostly favorable for the rest of the month, enabling crops to make fair to good progress. Growing conditions in windward areas remained cloudy with scattered showers. Hawaii island

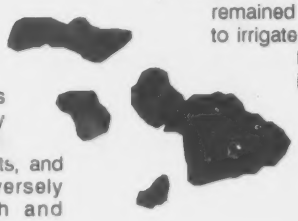
experienced a late season storm in windward areas during the end of the month. Heavy rains accompanied by an April 28th lightning storm caused major flooding in Waimea and along the Hamakua coast. Water damage and disease incidence increased and adversely affected crop progress.

Generally favorable weather conditions aided crop growth in May. Skies were mostly sunny with light to moderate rainfall in leeward sections and occasionally heavy in windward areas. Temperatures varied from record lows early in the month to record highs at mid-month. Favorable weather continued into June with warmer, drier conditions necessitating an increase in irrigation and spraying to control insects.

July - September



Variable weather had mixed effects on agriculture in July. Crop

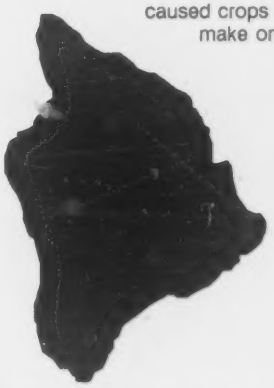


progress was good early in the month under mostly sunny skies and light showers. Heavy showers at mid-mont. caused flooding, washouts, and disease outbreaks adversely affecting crop growth and production. Mostly favorable weather returned by the end of the month. Variable conditions continued in August but temperatures rose into the 90's. Showers were scattered but heavy at times causing an increase in insect and disease damage. Warm, sunny conditions returned in September. Showers were scattered and light, making irrigation necessary. Active spraying was needed to control heavy insect infestations brought on by the warm weather.

October - December

October started with heavy rains which curtailed farming activity and caused some minor flooding in low lying areas. Heaviest rainfall at the beginning of the month was reported in Kihei, Wailuku, and Lahaina, Maui and in Puna and Ka'u districts on the Big Island. Diminishing trade winds and fair skies then gave rise to hot, humid conditions for the rest of the month. Although disease incidence and insect infestations increased, the mostly dry weather allowed farmers to catch up on field operations which were delayed by rains during the early part of October. Warm temperatures and sunny skies combined with light to moderate showers provided near ideal conditions for most farmers during November. Rainfall fell mostly on Kauai and Oahu during

mid-month; while Maui and Hawaii remained relatively dry, forcing farmers to irrigate heavily. Declining reservoir levels forced officials to implement conservation restrictions on farmers using the State's irrigation system. Crop yields in Waimea were reduced due to the water restrictions. Variable weather in December caused crops to make only



fair progress. Sunny days and cool nights benefitted the crops until the 10th of the month, when heavy showers, gusty winds and cool temperatures encased most of the State. Crops in exposed areas suffered some wind damage. Although dry weather returned the following week, temperatures continued to drop and were at record daily lows on a few occasions. Warm, sunny days continued until month's end, when moderate to heavy showers pelted the entire State.

WEATHER: Precipitation, selected stations, State of Hawaii, 1989

STATIONS	YEAR & NORMAL	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.	Annual	% OF NORMAL
ISLAND OF HAWAII															
Hawaii National Park Hq. 54	Normal	10.61	10.23	11.75	10.10	7.75	4.67	5.23	7.20	4.58	6.89	11.47	12.33	102.81	
	1989	26.53	10.49	14.25	10.72	14.84	7.87	20.98	4.93	6.02	14.70	2.14	2.13	135.60	131.9
Hilo (285)	Normal	9.07	12.90	13.69	12.88	10.07	6.61	9.54	10.88	7.44	10.96	13.77	15.76	133.57	
	1989	35.40	7.00	6.10	38.30	19.20	7.10	23.20	8.10	8.40	15.30	1.00	7.30	176.40	132.1
Kealakekua (HI84)	Normal	3.50	2.40	3.80	4.10	5.90	6.10	6.80	8.70	8.00	6.20	3.60	2.10	61.20	
	1989	2.60	7.20	4.60	7.50	1.10	3.00	4.20	4.40	4.90	5.90	1.70	.80	47.90	78.3
Naalehu 14	Normal	7.97	5.85	5.53	2.70	2.18	1.79	1.58	3.92	3.36	3.88	5.21	4.57	48.54	
	1989	9.21	11.46	2.89	10.31	.82	2.60	13.40	3.05	3.71	13.94	1.92	1.48	74.79	154.1
Pahoa (HI83)	Normal	11.02	13.17	15.16	12.59	11.87	8.10	10.20	11.13	8.50	11.81	14.28	17.28	145.11	
	1989	33.20	5.50	8.70	27.60	11.20	8.70	28.20	8.00	10.40	17.80	2.10	7.60	169.00	116.5
ISLAND OF KAUAI															
Eleele 927	Normal	5.74	3.39	3.28	2.39	1.74	1.10	1.33	1.79	1.40	2.61	3.60	5.12	33.49	
	1989	12.52	6.57	7.00	1.04	1.67	.70	6.14	1.46	.94	2.95	2.32	2.82	46.13	137.7
Kekaha 944	Normal	4.63	2.57	2.37	1.56	1.04	.25	.39	.75	.74	1.72	2.18	4.24	22.44	
	1989	6.36	4.99	5.96	.62	.16	.11	4.47	.16	.46	1.64	2.13	4.09	31.15	138.8
Wailua (HI40)	Normal	9.42	7.09	8.28	7.07	5.45	4.07	5.68	6.60	4.65	7.45	9.03	9.41	84.20	
	1989	16.80	15.30	11.60	9.60	2.30	1.40	13.70	7.60	4.70	10.70	8.40	2.70	104.80	124.5
ISLAND OF LANAI															
Lanai Airport (LNY)	Normal	5.50	1.40	1.60	.90	.70	.20	.50	.60	.70	1.60	1.20	2.30	17.20	
	1989	.26	M	2.38	1.60	.30	.77	.50	.25	.78	5.13	1.15	4.49	17.61	102.4
ISLAND OF MAUI															
Hamakuapoko HC&S 485	Normal	5.10	4.85	5.81	4.50	2.83	2.39	3.60	3.65	1.89	3.69	5.07	6.73	50.11	
	1989	7.39	7.19	5.34	22.75	2.93	1.97	6.75	2.19	3.58	2.69	1.99	4.74	69.51	138.7
Hana Airport 355	Normal	9.47	7.93	8.85	7.14	5.70	3.82	5.28	5.78	4.85	6.48	8.16	6.76	80.22	
	1989	6.91	4.84	11.16	40.86	7.44	4.15	10.70	10.01	6.94	13.73	2.20	5.80	124.74	155.5
Kihei 311	Normal	3.67	1.76	2.03	.79	.27	.10	.15	.19	.07	.68	1.69	2.39	13.79	
	1989	.71	4.37	3.42	4.91	.00	.00	.82	+	.00	4.63	4.37	3.76	26.99	195.7
Kula (HI65)	Normal	5.64	3.45	3.53	2.98	2.20	1.41	2.17	2.07	1.93	1.91	2.95	3.61	33.85	
	1989	18.00	4.20	9.00	9.30	--	1.60	2.10	.80	.30	5.00	.80	7.50	58.60	173.1
Lahaina 361	Normal	3.70	1.65	2.04	.93	.48	.09	.21	.33	.23	.90	2.07	2.86	15.49	
	1989	.90	4.72	3.23	M 4.31	M .14	.00	.00	.13	.00	7.04	2.14	4.34	26.95	174.0
Wailuku (HI66)	Normal	4.88	3.81	4.16	2.41	1.02	.43	.74	.77	.49	1.86	2.79	4.65	28.01	
	1989	2.00	7.40	5.60	25.30	.20	.70	1.90	.40	.30	7.00	1.00	4.00	55.80	199.2
ISLAND OF MOLOKAI															
Molokai Airport (MKK)	Normal	4.64	2.84	3.90	1.90	1.14	.48	.74	.76	.70	1.59	3.48	4.37	26.54	
	1989	.30	2.40	1.20	5.30	.10	1.00	.40	1.00	.80	3.20	.30	3.10	19.10	72.0
ISLAND OF OAHU															
Kahuku (HI09)	Normal	4.40	3.10	4.40	2.90	1.90	1.30	1.70	2.10	1.90	2.50	3.40	4.10	33.70	
	1989	2.10	3.10	1.20	1.90	.60	.20	.40	.10	.10	.30	.10	1.60	11.70	34.7
Waialua 847	Normal	4.99	3.65	3.84	2.32	1.34	.44	.95	1.26	.67	2.27	3.15	4.64	29.52	
	1989	2.70	6.55	2.04	3.73	.22	.95	1.33	.63	.24	5.58	2.81	3.33	30.11	102.0
Waianae (HI17)	Normal	3.79	3.13	2.31	1.12	.61	.35	.38	.84	.77	1.87	1.81	2.66	19.64	
	1989	.50	3.90	2.50	1.60	.10	+	1.70	.10	.10	1.00	.70	.10	12.30	62.6
Waimanalo Exp. 795.1	Normal	8.35	3.98	5.80	4.11	2.83	1.22	1.92	1.88	1.81	3.59	6.31	6.26	48.06	
	1989	3.51	8.73	5.31	12.41	.96	1.85	3.50	1.89	1.03	11.03	3.26	4.86	58.34	121.4
Waipahu Sugar 750	Normal	5.00	2.71	3.20	1.88	1.20	.36	.76	.92	.84	2.04	3.35	4.09	26.35	
	1989	3.34	10.97	2.48	.87	.16	1.18	2.62	.61	.29	12.76	.79	1.69	37.76	143.4

M = Incomplete.
+ = Less than 0.05.
-- = Missing.
Source: U.S. Department of Commerce, National Oceanic and Atmospheric Administration.

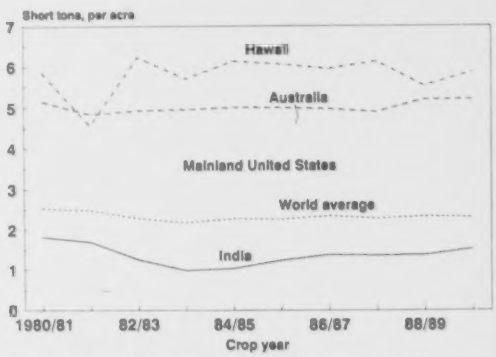
SUGARCANE

SUGARCANE: Number of farms, acreage, yield, production, price, and value, by islands, 1985-89 [1]

Year	Farms [2]	Acreage		Yield per acre (cane) [3]	Production of cane for sugar	Farm price [3]	Value of cane for sugar [4]
		In crop [2]	Harvested for sugar				
	Number	1,000 acres		Tons	1,000 tons	Dollars per ton	Million dollars
				STATE			
1985	155	187.9	83.0	95.4	7,916	28.10	222.4
1986	120	184.3	83.6	100.2	8,379	27.90	233.8
1987	100	181.1	79.5	100.8	8,014	27.20	218.0
1988	75	176.5	78.9	96.4	7,606	27.60	209.9
1989.....	**70**	**170.8**	**74.7**	**94.8**	**7,082**	**29.70**	**210.3**
				HAWAII			
1985	144	69.9	28.7	93.6	2,686	26.00	69.8
1986	109	69.1	28.7	97.5	2,797	26.50	74.1
1987	89	68.5	28.4	90.4	2,566	25.10	64.4
1988	64	66.7	26.2	87.8	2,300	26.10	60.0
1989.....	**60**	**63.1**	**23.1**	**92.2**	**2,130**	**26.70**	**56.9**
				KAUAI			
1985	5	43.7	21.0	85.8	1,802	29.60	53.3
1986	5	43.2	20.9	94.6	1,977	27.30	54.0
1987	5	43.0	18.5	103.4	1,912	26.80	51.2
1988	5	41.9	20.2	99.5	2,009	25.80	51.8
1989.....	**5**	**40.9**	**20.3**	**89.6**	**1,819**	**28.30**	**51.5**
				MAUI			
1985	3	47.2	22.4	98.6	2,208	28.80	63.6
1986	3	46.1	21.9	102.8	2,251	30.00	67.5
1987	3	43.9	20.9	107.0	2,236	29.90	66.9
1988	3	42.2	21.1	100.9	2,128	31.10	66.2
1989.....	**2**	**42.5**	**19.6**	**98.2**	**1,925**	**34.50**	**66.4**
				OAHU			
1985	3	27.1	10.9	111.9	1,220	29.30	35.7
1986	3	25.9	12.1	111.9	1,354	28.20	38.2
1987	3	25.7	11.7	111.1	1,300	27.30	35.5
1988	3	25.7	11.4	102.5	1,169	27.30	31.9
1989.....	**3**	**24.3**	**11.7**	**103.2**	**1,208**	**29.40**	**35.5**

[1] Primary data source, Hawaiian Sugar Planters' Association.
[2] At end of year.
[3] Yield and farm price may not compute exactly due to rounding.
[4] Value of cane for sugar estimated by deducting processing and marketing costs from value of sugar and molasses. Processing costs based on toll charges paid by independent producers.

Hawaii Sugar Yields Compared with Selected Other Cane Sugar Producers



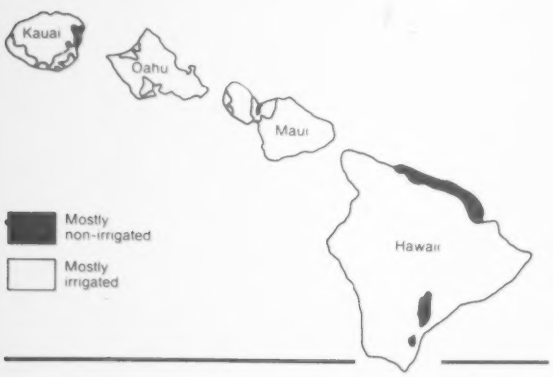
Note: Hawaii's yield has been annualized. Yields for other countries and regions have not been annualized.
Source: USDA, FAS.

SUGAR: Production of raw sugar and molasses, price, and value, by islands, 1985-89 [1]

Year	Mill production		Average returns received [3]		Value of production		
	Raw sugar 96°	Molasses [2]	Raw sugar 96°	Molasses [2]	Raw sugar 96°	Molasses [2]	Total
	1,000 tons		Dollars per ton		Million dollars		
				STATE			
1985	1,012	256	328	34.80	331.9	8.9	340.8
1986	1,043	285	334	47.50	348.4	13.5	361.9
1987	979	272	332	39.90	325.0	10.9	335.9
1988	928	267	337	41.70	312.9	11.1	324.0
1989	**864**	**229**	**363**	**37.00**	**313.6**	**8.4**	**322.0**
				HAWAII			
1985	319	78	327	35.40	104.3	2.8	107.1
1986	329	85	333	48.50	109.6	4.1	113.7
1987	291	81	330	40.50	96.0	3.3	99.3
1988	267	72	335	41.00	89.4	3.0	92.4
1989	**235**	**65**	**361**	**36.00**	**84.8**	**2.3**	**87.1**
				KAUAI			
1985	242	61	328	35.10	79.4	2.1	81.5
1986	241	67	334	47.40	80.5	3.2	83.7
1987	229	65	334	39.70	76.5	2.6	79.1
1988	228	73	338	42.50	77.1	3.1	80.2
1989	**211**	**61**	**364**	**38.00**	**76.8**	**2.3**	**79.1**
				MAUI			
1985	290	83	328	34.60	95.1	2.9	98.0
1986	303	88	334	47.00	101.2	4.1	105.3
1987	300	87	332	39.40	99.6	3.4	103.0
1988	292	81	338	41.20	98.7	3.3	102.0
1989	**272**	**68**	**364**	**36.00**	**99.0**	**2.4**	**101.4**
				OAHU			
1985	161	34	330	33.60	53.1	1.1	54.2
1986	170	45	336	47.00	57.1	2.1	59.2
1987	159	39	333	40.10	52.9	1.6	54.5
1988	141	41	338	42.70	47.7	1.7	49.4
1989	**146**	**35**	**363**	**39.00**	**53.0**	**1.4**	**54.4**

[1] Primary data source, Hawaiian Sugar Planters' Association.
[2] Commercial.
[3] Derived from production and value. State and island prices may not compute exactly due to rounding.

Hawaii's Sugar Islands



FLORICULTURE AND NURSERY PRODUCTS

FLORICULTURE AND NURSERY PRODUCTS: State of Hawaii, 1985-89

Commodity	Farms having sales [1]					Production area				
	1985	1986	1987	1988	1989	1985	1986	1987	1988	1989
	Number					1,000 square feet				
Selected cut flowers:										
Anthuriums	195	175	167	156	155	19,635	19,158	18,640	17,100	14,980
Bird of Paradise	61	46	55	58	58	NA	827	2,283	2,520	2,185
Carnations, miniature [2]	NA	9	11	8	11	NA	139	125	175	190
Carnations, standard	16	12	9	8	5	NA	206	145	105	95
Chrysanthemums, pompon	14	14	13	10	10	NA	536	547	410	545
Chrysanthemums, other	4	5	5	[3]	[3]	NA	87	92	[3]	[3]
Ginger, pink [4]	NA	NA	NA	51	86	NA	NA	NA	1,640	3,145
Ginger, red	65	52	88	93	121	NA	2,265	3,759	4,200	4,795
Gingers, other [5]	NA	19	41	26	36	NA	610	1,341	945	740
Heliconias	34	58	78	83	120	NA	3,006	4,992	6,620	8,460
Proteas	35	18	37	42	36	5,445	3,964	5,174	5,200	5,580
Roses, Sweetheart [6]	NA	6	6	6	6	NA	153	155	130	105
Roses, Tea	10	9	11	13	15	NA	825	855	890	925
Other	71	36	31	32	41	NA	NA	NA	NA	NA
Orchids:										
Cut:										
Cattleyas	25	14	19	12	22	NA	42	67	62	105
Cymbidiums	18	16	19	14	13	NA	409	542	485	380
Sprays:										
Dendrobiums	74	60	72	83	83	2,488	2,585	2,323	2,530	2,975
Oncidiums [7]	NA	NA	NA	NA	13	NA	NA	NA	NA	65
Other [8]	26	16	16	6	5	NA	NA	NA	NA	NA
Potted:										
Dendrobiums [9]	88	52	86	76	80	872	744	670	1,110	950
Other	71	49	72	69	61	NA	571	742	815	815
Flowers for individual and lei flower use:										
Carnations	19	19	18	17	22	NA	NA	NA	NA	NA
Vanda, Miss Joaquim	31	21	27	24	23	NA	NA	NA	NA	NA
Plumerias	22	18	19	18	20	NA	NA	NA	NA	NA
Tuberoses	8	6	6	6	8	NA	NA	NA	NA	NA
Dendrobiums	44	42	42	40	53	NA	NA	NA	NA	NA
Pikake	20	18	10	12	15	NA	NA	NA	NA	NA
Other	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Foliage:										
Potted:										
Primarily for indoor or patio use [10]	110	73	102	86	79	NA	5,809	7,824	6,210	7,995
Primarily for landscape use	45	35	34	47	51	NA	NA	NA	NA	NA
Unfinished stock (for further growing on)	29	25	24	55	21	NA	NA	NA	NA	NA
Cut:										
Ti leaves	53	37	46	51	60	NA	NA	1,751	2,740	2,660
Other greens	51	36	39	43	54	NA	NA	NA	NA	NA
Potted flowering plants:										
Anthuriums	18	10	15	20	[11]	NA	NA	112	110	[11]
Chrysanthemums	13	13	13	12	8	263	243	272	250	260
Poinsettias	38	29	34	39	38	449	424	449	515	640
Other	41	37	62	60	47	NA	NA	NA	NA	NA
Ornamentals & trees	40	34	42	62	58	NA	NA	NA	NA	NA
Plant rentals [12]	NA	NA	NA	41	46	NA	NA	NA	NA	NA
Other nursery products [13]	74	54	[14] 58	50	54	NA	NA	NA	NA	NA
Total	675	635	670	675	710					

See footnotes at end of table.

Continued

FLORICULTURE AND NURSERY PRODUCTS: State of Hawaii, 1985-89 -- Continued

Commodity	Number sold					Value of sales				
	1985	1986	1987	1988	1989	1985	1986	1987	1988	1989
							1,000 dollars			
Selected cut flowers: (000 dozens)										
Anthuriums	2,305	2,335	2,072	1,822	1,385	7,645	9,878	8,652	8,022	7,811
Birds of Paradise	35	78	58	77	85	213	325	311	378	480
Carnations, miniature (000 bunches) [2]	NA	85	100	127	155	NA	179	239	337	430
Carnations, standard	151	41	42	37	35	326	133	107	106	96
Chrysanthemums, pompon (000 bunches)	455	353	435	404	385	833	547	697	593	695
Chrysanthemums, other	5	13	11	[3]	[3]	23	76	80	[3]	[3]
Ginger, pink [4]	NA	NA	NA	90	95	NA	NA	NA	658	729
Ginger, red	78	85	125	131	165	246	355	560	606	734
Gingers, other [5]	NA	50	62	14	20	NA	282	485	113	114
Heliconias	31	77	161	206	185	125	391	1,427	1,364	1,130
Proteas (000 stems)	975	983	1,513	1,696	1,690	639	656	963	1,119	1,184
Roses, Sweetheart [6]	NA	95	56	87	80	NA	215	219	281	260
Roses, Tea	645	548	461	609	635	1,956	1,972	1,950	2,647	2,444
Other	NA	NA	NA	NA	NA	1,155	672	820	1,247	1,127
Orchids:										
Cut: (000 flowers)										
Cattleyas	54	31	50	36	90	66	31	56	33	79
Cymbidiums	530	367	389	297	230	170	165	192	150	136
Sprays: (000 dozens)										
Dendrobiums	291	314	378	417	435	1,687	2,115	2,352	2,639	2,798
Oncidiums [7]	NA	NA	NA	NA	45	NA	NA	NA	NA	44
Other [8]	NA	NA	NA	NA	NA	54	40	60	57	28
Potted: (000 pots)										
Dendrobiums [9]	201	265	641	481	455	1,061	1,169	2,208	2,019	2,160
Other	365	310	1,115	375	530	2,263	2,161	2,159	2,266	3,152
Flowers for individual and lei flower use: (Million blooms)										
Carnations	31.0	25.3	26.6	23.3	24.6	1,149	935	967	972	1,134
Vanda, Miss Joaquim	24.0	26.1	23.3	31.1	34.7	1,015	899	708	888	836
Plumerias	21.8	24.4	25.3	25.2	21.5	432	422	413	433	427
Tuberoses	36.0	38.0	95.5	43.6	36.6	1,149	1,075	2,433	1,198	1,029
Dendrobiums	18.0	18.0	17.9	19.8	24.9	458	488	500	536	709
Pikake (000 strands)	134.0	182.0	122.4	128.0	106.3	220	258	175	189	194
Other [5]	NA	NA	NA	NA	NA	NA	183	151	393	279
Foliage:										
Potted:										
Primarily for indoor or patio use [10]	NA	NA	NA	NA	NA	12,019	12,931	13,330	12,424	14,575
Primarily for landscape use	NA	NA	NA	NA	NA	1,812	2,215	2,302	4,751	1,709
Unfinished stock (for further growing on)	NA	NA	NA	NA	NA	1,845	2,031	1,496	1,795	1,102
Cut:										
Ti leaves (Million leaves)	12.7	12.7	15.0	12.0	8.4	491	534	636	733	478
Other greens	NA	NA	NA	NA	NA	309	237	191	369	358
Potted flowering plants: (000 pots)										
Anthuriums	90	76	150	99	[11]	158	102	229	352	[11]
Chrysanthemums	240	289	309	233	228	779	835	966	781	884
Poinsettias	192	190	219	227	265	618	636	733	813	1,045
Other	NA	NA	NA	NA	NA	479	607	813	1,094	1,432
Ornamentals & trees	NA	NA	NA	NA	NA	603	628	2,015	2,226	3,370
Plant rentals [12]	NA	NA	NA	NA	NA	NA	NA	NA	2,373	2,820
Other nursery products [13]	NA	NA	NA	NA	NA	2,164	2,754	3,136	2,596	4,283
Total						44,162	49,132	54,731	59,551	62,295

NA = Not available. [1] Number for each individual flower item is count of those having sales of that item during each year; "Total" is unduplicated count. [2] Prior to 1986, included with "Carnations". [3] Included with "Other" cut flowers to avoid disclosure of individual operations. [4] Prior to 1988, included with "Other Gingers". [5] Prior to 1986, included with "All other nursery products". [6] Prior to 1986, included with "Roses". [7] Prior to 1989, included with "Other" orchid sprays. [8] Includes vanda hybrids, phalaenopsis, and cypripediums. [9] Includes community pots. [10] Includes hanging baskets. [11] Included in "Other" potted flowering plants to avoid disclosure of individual operations. [12] Prior to 1988, included with "All other nursery products". [13] Includes bedding plants and other flowers or nursery products not elsewhere classified. [14] Revised

FLORICULTURE AND NURSERY PRODUCTS

FLORICULTURE AND NURSERY PRODUCTS: Hawaii Island, 1985-89

Commodity	Number sold					Value of sales				
	1985	1986	1987	1988	1989	1985	1986	1987	1988	1989
						1,000 dollars				
Selected Items:										
Anthuriums, cut (000 dozens)	2,185	2,250	1,988	1,737	1,367	7,246	9,552	8,321	7,678	7,717
Birds of Paradise	NA	NA	NA	NA	67	NA	NA	NA	NA	375
Cymbidiums (000 flowers)	525	363	384	287	224	162	162	188	143	130
Foliage, cut	NA	NA	NA	NA	NA	533	391	509	763	521
Foliage, potted (indoor/patio use)	NA	NA	NA	NA	NA	5,653	5,740	5,956	6,609	7,400
Ginger, red (000 dozens)	NA	NA	54	60	65	NA	NA	214	227	246
Gingers, other (000 dozens)	NA	NA	NA	NA	31	NA	NA	NA	NA	207
Heliconias (000 dozens)	NA	23	52	92	59	NA	126	373	454	384
Orchids, potted (000 pots)	147	322	504	355	435	914	1,179	1,955	1,805	2,046
Ornamentals and trees	NA	NA	NA	NA	NA	100	236	382	398	675
Plumerias (million flowers)	NA	NA	NA	NA	9.0	NA	NA	NA	NA	1[illegible]
Poinsettias (000 pots)	19	21	24	28	28	NA	NA	NA	101	110
Unfinished stock and cuttings	NA	NA	NA	NA	NA	370	225	137	141	[1]
Vanda, Miss Joaquim (million flowers)	23.0	25.2	16.5	24.0	22.0	985	877	473	607	516
All other flowers and nursery products [2]	NA	NA	NA	NA	NA	3,642	4,309	5,160	10,110	8,531
Total						19,605	22,797	23,668	29,036	29,038

NA = Not available.

[1] Included with "All other" category to avoid disclosure of individual operations.

[2] Only selected items are shown separately. All other cut and lei flowers, potted plants, nursery products, plant rentals, etc., for the island are included in the "All other" category.

FLORICULTURE AND NURSERY PRODUCTS: Kauai Island, 1985-89

Commodity	Number sold					Value of sales				
	1985	1986	1987	1988	1989	1985	1986	1987	1988	1989
						1,000 dollars				
Selected Items:										
Ginger, red (000 dozens)	NA	NA	NA	NA	6	NA	NA	NA	NA	43
Gingers, other (000 dozens)	NA	NA	NA	NA	5	NA	NA	NA	NA	47
Heliconias (000 dozens)	NA	NA	1	4	13	NA	NA	6	28	102
Ornamentals and trees	NA	NA	NA	NA	NA	NA	NA	20	103	340
All other flowers and nursery products [1]	NA	NA	NA	NA	NA	1,179	1,146	1,209	1,818	1,846
Total						1,179	1,146	1,235	1,949	2,378

NA = Not available.

[1] Only selected items are shown separately. All other cut and lei flowers, potted plants, nursery products, plant rentals, etc., for the island are included in the "All other" category.

FLORICULTURE AND NURSERY PRODUCTS: Maui/Molokai Islands, 1985-89

Commodity	Number sold					Value of sales				
	1985	1986	1987	1988	1989	1985	1986	1987	1988	1989
						1,000 dollars				
Selected Items:										
Birds of Paradise	NA	NA	NA	NA	4	NA	NA	NA	NA	23
Carnations, heads (million flowers)	29.0	21.7	22.1	18.7	18.8	1,060	817	840	810	908
Ginger, red (000 dozens)	NA	NA	NA	NA	41	NA	NA	NA	NA	220
Gingers, other (000 dozens)	NA	NA	59	56	51	NA	297	480	424	393
Heliconias (000 dozens)	NA	30	58	55	66	NA	159	490	413	362
Ornamentals and trees	NA	NA	NA	NA	NA	NA	NA	79	545	955
Proteas (000 stems)	747	932	1,064	1,501	1,385	564	545	810	984	999
All other flowers and nursery products [1]	NA	NA	NA	NA	NA	3,564	3,426	3,964	3,986	3,896
Total						5,188	5,244	6,663	7,162	7,756

NA = Not available.

[1] Only selected items are shown separately. All other cut and lei flowers, potted plants, nursery products, plant rentals, etc., for the islands are included in the "All other" category.

FLORICULTURE AND NURSERY PRODUCTS: Oahu Island, 1985-89

Commodity	Number sold					Value of sales				
	1985	1986	1987	1988	1989	1985	1986	1987	1988	1989
						1,000 dollars				
Selected items:										
Anthuriums, cut (000 dozens)	80	81	77	77	12	280	316	304	305	60
Cattleyas (000 flowers)	46	28	39	31	20	56	28	41	28	19
Chrysanthemums, pompon (000 bunches)	287	218	299	368	251	503	283	416	510	392
Chrysanthemums, potted (000 pots)	92	92	72	74	[1]	294	218	215	215	[1]
Dendrobiums, sprays (000 dozens)	215	196	187	213	200	1,115	1,375	1,247	1,413	1,392
Dendrobiums, for lei (million flowers)	10.4	11.0	10.9	10.0	13.6	253	305	321	289	410
Foliage, cut	NA	NA	NA	NA	NA	258	242	210	238	167
Foliage, potted (indoor/patio use)	NA	NA	NA	NA	NA	5,731	6,615	6,940	4,507	6,575
Ginger, red (000 dozens)	50	54	56	58	53	135	221	263	307	225
Gingers, other (000 dozens)	NA	5	8	28	28	10	20	37	239	196
Heliconias (000 dozens)	NA	24	50	55	47	NA	105	558	469	282
Orchids, potted (000 pots)	368	410	1,217	459	499	2,174	2,214	2,178	2,204	2,929
Pikake (000 strands)	105	112	65	53	66	157	154	98	87	97
Plumerias (million flowers)	7.7	8.4	8.7	9.1	10.5	148	148	144	129	198
Unfinished stock and cuttings	NA	NA	NA	NA	NA	655	905	748	965	210
All other flowers and nursery products [2]	NA	NA	NA	NA	NA	6,421	6,796	9,445	9,499	9,971
Total						18,190	19,945	23,165	21,404	23,123

NA = Not available.

[1] Included with "All other" category to avoid disclosure of individual operations.

[2] Only selected items are shown separately. All other cut and lei flowers, potted plants, nursery products, plant rentals, etc., for the island are included in the "All other" category.

FLORICULTURE AND NURSERY PRODUCTS: Value of grower sales, by islands, 1987-89

Year	Cut flowers [1]	Orchids	Lei flowers	Foliage [2]	Potted flowering plants	All other nursery products [3]	Total
	1,000 dollars						
STATE							
1987	16,510	7,027	5,347	17,955	2,741	5,151	54,731
1988	17,471	7,164	4,609	20,072	3,040	7,195	59,551
1989	**17,234**	**8,397**	**4,608**	**18,222**	**3,361**	**10,473**	**62,295**
HAWAII							
1987	NA	NA	NA	NA	NA	NA	23,668
1988	11,266	3,158	1,273	11,373	754	1,212	29,036
1989	**12,870**	**3,556**	**1,213**	**8,760**	**981**	**1,658**	**29,038**
KAUAI							
1987	NA	NA	NA	NA	NA	NA	1,235
1988	56	139	133	[4]	118	1,503	1,949
1989	**226**	**217**	**122**	[4]	**283**	**1,530**	**2,378**
MAUI/MOLOKAI							
1987	NA	NA	NA	NA	NA	NA	6,663
1988	2,369	209	1,351	[4]	528	2,705	7,162
1989	**2,586**	**269**	**1,382**	[4]	**591**	**2,928**	**7,756**
OAHU							
1987	NA	NA	NA	NA	NA	NA	23,165
1988	3,780	3,658	1,852	6,433	1,640	4,041	21,404
1989	**1,552**	**4,355**	**1,891**	**7,917**	**1,506**	**5,902**	**23,123**

NA = Not available.

[1] Cut orchids included in "Orchids" category.

[2] Includes potted, cut, and unfinished.

[3] Includes bedding plants, plant rentals, and any other nursery products not elsewhere classified. Sum of islands may not add to total.

[4] Island data not shown separately to avoid disclosure of individual operations but combined and included in the State total.

FLORICULTURE AND NURSERY PRODUCTS

FLORICULTURE AND NURSERY PRODUCTS: Number of farms and growing area, by islands, 1985-89

Year	Farms	Greenhouse [1]	Artificial shade	Natural shade	Open field	Total area
	Number	1,000 square feet		Acres		
			STATE			
1985	675	2,836	29,643	91	924	1,761
1986	635	2,535	27,610	70	905	1,667
1987	670	3,314	27,394	55	1,080	1,840
1988	675	4,690	23,800	70	1,109	1,833
1989	**710**	**6,325**	**23,035**	**50**	**1,490**	**2,214**
			HAWAII			
1985	310	1,439	19,087	82	413	966
1986	300	1,360	19,330	70	420	965
1987	320	1,670	19,983	55	450	1,002
1988	325	2,603	18,624	65	541	1,094
1989	**320**	**2,772**	**17,720**	**49**	**620**	**1,139**
			KAUAI			
1985	30	12	244	5	26	37
1986	25	5	270	--	25	31
1987	30	25	260	--	40	47
1988	35	47	195	--	45	50
1989	**50**	**370**	**280**	**–**	**75**	**90**
			MAUI/MOLOKAI			
1985	85	307	1,286	--	259	296
1986	75	240	900	--	180	207
1987	90	340	760	--	270	295
1988	85	307	432	4	266	287
1989	**110**	**195**	**1,150**	**1**	**460**	**492**
			OAHU			
1985	250	1,078	9,026	4	226	462
1986	235	930	7,110	--	280	464
1987	230	1,279	6,391	--	320	496
1988	230	1,733	4,549	1	257	402
1989	**230**	**2,988**	**3,885**	**–**	**335**	**493**

– = Less than 1/2 acre.
[1] Glass or glass substitute structure.

FLORICULTURE AND NURSERY PRODUCTS: Out-of-State sales, State of Hawaii, 1985-89

Commodity	1985	1986	1987	1988	1989
			1,000 dollars [1]		
Anthuriums, cut	7,581	8,653	9,170	8,816	9,280
Birds of Paradise	175	415	425	574	895
Foliage, cut:	550	858	1,010	[2]	[2]
Ti leaves	NA	NA	NA	687	730
Other cut greens	NA	NA	NA	712	720
Foliage, potted	9,550	9,782	8,935	8,609	8,130
Ginger, red	270	565	705	1,104	1,180
Gingers, other	[3]	265	365	636	355
Heliconias	150	735	1,270	1,757	1,800
Orchids, cut:					
Cattleyas	232	456	163	367	230
Cymbidiums	155	108	136	117	115
Dendrobiums, sprays	1,031	1,444	1,840	2,196	2,200
Orchids, potted:					
Dendrobiums	645	653	2 040	1,112	1,010
Other orchids	1,285	1,186	1,200	1,416	3,005
Proteas	560	704	1,003	1,091	1,155
Unfinished potted foliage stock	1,160	740	575	831	650
All other flowers and nursery products	940	1,572	3,067	3,017	6,020
Total	24,284	28,136	31,904	33,042	37,475

NA = Not available.

[1] Based on F.O.B. island value. Includes both wholesale and retail sales. Does not include sales of cut flowers, leis, etc., purchased within the State and hand carried out.

[2] Breakdown between ti leaves and other cut greens began in 1988.

[3] Not shown separately.

ANTHURIUMS

ANTHURIUMS: Mainland and foreign shipments from the Island of Hawaii, 1985-89

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.	Total
							1,000 dozens						
Mainland:													
1985	70.1	93.0	62.9	66.9	81.6	65.7	71.0	80.0	79.0	80.0	84.0	118.0	952.2
1986	83.0	105.0	80.0	91.0	101.0	84.0	84.0	89.0	95.0	89.0	85.5	110.0	1,096.5
1987	84.0	101.8	81.0	86.9	88.8	79.7	98.4	81.2	85.0	77.0	77.0	94.9	1,035.7
1988	65.8	84.0	68.5	75.0	78.5	68.4	62.2	64.3	63.4	60.8	61.6	74.7	827.2
1989	**60.9**	**74.2**	**60.1**	**56.9**	**63.9**	**61.2**	**56.3**	**63.0**	**61.9**	**60.9**	**55.0**	**63.6**	**737.9**
Foreign:													
1985	31.0	28.4	29.7	30.6	53.7	51.7	74.1	82.5	74.0	94.2	57.2	51.9	659.0
1986	36.1	18.9	29.9	41.0	62.3	62.9	89.2	100.1	82.9	99.3	59.9	52.0	734.5
1987	23.4	15.5	22.8	34.9	41.0	54.5	76.7	54.3	52.3	53.5	34.3	32.3	495.5
1988	15.7	11.9	21.3	35.6	32.8	47.6	42.4	38.8	30.4	23.3	23.4	18.2	341.4
1989	**10.2**	**8.0**	**15.1**	**14.2**	**21.3**	**29.3**	**23.9**	**21.6**	**24.2**	**22.7**	**18.9**	**13.5**	**222.9**
Total shipments: [1]													
1985	101.1	121.4	92.6	97.5	135.3	117.4	145.1	162.5	153.0	174.2	141.2	169.9	1,611.2
1986	119.1	123.9	109.9	132.0	163.3	146.9	173.2	189.1	177.9	188.3	145.4	162.0	1,831.0
1987	107.4	117.3	103.8	121.8	129.8	134.2	175.1	135.5	137.3	130.5	111.3	127.2	1,531.2
1988	81.5	95.9	89.8	110.6	111.3	116.0	104.6	103.1	93.8	84.1	85.0	92.9	1,168.6
1989	**71.1**	**82.2**	**75.2**	**71.1**	**85.2**	**90.5**	**80.2**	**84.6**	**86.1**	**83.6**	**73.9**	**77.1**	**960.8**

[1] Sum of mainland and foreign may not add to total shipments due to rounding.

ANTHURIUMS

ANTHURIUMS: Mainland shipments, percent of flowers sold by size, Hawaii island, 1985-89

Year	Miniature	Small	Medium	Large	Extra-large
1985	21	23	31	21	4
1986	21	24	30	20	5
1987	19	25	30	20	6
1988	22	24	28	19	7
1989	**22**	**24**	**27**	**20**	**7**

ANTHURIUMS: Foreign shipments, by destination, Hawaii island, 1985-89

Destination	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.	Total
	1,000 dozens												
Australia:													
1985	.9	1.5	.6	.7	1.7	.2	.6	.2	.1	*	*	*	6.5
1986-89 [1]													
Hong Kong:													
1985	.7	1.3	.8	.8	1.0	.9	1.2	1.1	2.1	1.4	1.2	1.6	14.1
1986	2.4	1.4	1.2	1.6	1.5	1.6	2.0	1.5	2.0	1.8	1.4	1.5	19.9
1987	2.3	1.2	1.5	1.0	1.2	1.5	1.4	1.3	2.3	1.1	.8	.6	16.2
1988	.6	.8	.6	.3	.4	.3	.3	.4	.3	.3	.3	.2	4.8
1989	**.4**	**.2**	**.2**	**.2**	**.2**	**.2**	**.2**	**.2**	**.2**	**.3**	**.2**	**.1**	**2.6**
Italy:													
1985	15.9	12.3	13.8	10.3	16.1	12.3	11.6	15.9	18.3	42.7	13.6	15.3	198.1
1986	15.3	8.1	14.4	12.4	14.1	12.5	15.3	16.1	21.2	45.1	13.2	15.2	202.9
1987	11.1	6.4	8.8	14.5	11.7	10.1	12.4	11.1	10.4	21.3	8.0	7.9	133.7
1988	5.2	4.1	5.2	9.1	4.9	7.5	5.5	9.1	3.6	3.9	3.4	3.5	65.0
1989	**1.8**	**1.7**	**3.1**	**2.5**	**3.3**	**3.2**	**2.7**	**2.9**	**4.1**	**4.2**	**2.1**	**1.3**	**32.9**
Japan:													
1985	6.1	3.5	8.9	15.1	26.9	35.1	58.3	62.5	47.7	45.8	37.8	29.3	377.0
1986	10.9	6.1	12.1	23.2	44.0	47.1	70.9	81.0	56.4	48.4	43.0	32.5	475.6
1987	9.3	5.3	12.0	18.1	27.5	42.1	61.9	40.6	37.1	28.5	23.2	21.9	327.5
1988	8.7	5.7	13.8	24.0	25.9	38.8	36.0	28.2	25.9	17.8	18.8	14.0	257.6
1989	**7.3**	**5.4**	**10.7**	**10.4**	**16.5**	**25.3**	**20.5**	**17.9**	**19.1**	**17.0**	**15.8**	**11.7**	**177.6**
Switzerland:													
1985	5.2	7.0	3.4	1.7	5.2	1.3	.4	.6	3.4	1.3	1.8	3.1	34.4
1986	.7	.9	.6	3.1	1.8	1.1	.7	1.1	2.8	2.7	1.5	1.5	18.5
1987	.2	2.3	.5	1.3	.5	.5	.6	.4	2.1	2.1	1.6	1.0	13.1
1988	.5	1.1	.7	.9	.4	.6	.4	.6	.4	.7	.8	.4	7.5
1989	**.6**	**.6**	**.7**	**.5**	**.7**	**.4**	**.4**	**.6**	**.7**	**.9**	**.8**	**.3**	**7.2**
All other:													
1985	2.2	2.8	2.2	2.0	2.8	1.9	2.0	2.2	2.4	3.0	2.8	2.6	28.9
1986	6.8	2.4	1.6	.7	.9	.6	.3	.4	.5	1.3	.8	1.3	17.6
1987	.5	.3	*	*	.1	.3	.4	.9	.4	.5	.7	.9	5.0
1988	.7	.2	1.0	1.3	1.2	.4	.2	.5	.2	.6	.1	.1	6.5
1989	**.1**	**.1**	**.4**	**.6**	**.6**	**.2**	**.1**	*	**.1**	**.3**	*	*	**2.6**

* = Less than 50.
[1] Included in "All other" category.

ANTHURIUMS: Production area, by islands, 1985-89

Year	Artificial shade [1]	Natural shade	Total area
	1,000 square feet		
		STATE	
1985	16,196	3,439	19,635
1986	16,144	3,014	19,158
1987	16,160	2,480	18,640
1988	14,250	2,850	17,100
1989	**12,870**	**2,110**	**14,980**
		HAWAII	
1985	15,750	3,400	19,150
1986	15,750	3,000	18,750
1987	15,730	2,470	18,200
1988	13,698	2,832	16,530
1989	**12,620**	**2,090**	**14,710**
		KAUAI	
1985	25	26	51
1986	27	10	37
1987	[2]	[2]	[2]
1988	[2]	[2]	[2]
1989	[2]	[2]	[2]
		MAUI/MOLOKAI	
1985	6	13	19
1986	2	4	6
1987	[2]	[2]	[2]
1988	[2]	[2]	[2]
1989	[2]	[2]	[2]
		OAHU	
1985	415	–	415
1986	365	–	365
1987	330	[2]	[2]
1988	350	[2]	[2]
1989	**165**	[2]	[2]

– = Less than 500 square feet.
[1] Includes saran and rigid type greenhouses.
[2] Included in State total to avoid disclosure of individual operations.

DENDROBIUM ORCHIDS: Sales and value, 1985-89

Year	Individual blossoms		Cut sprays		Potted plants				Total value
					In bud/bloom		Community pots		
	Number sold	Value	Number sold	Value	Number sold	Value	Number sold	Value	
	Million blooms	1,000 dollars	1,000 dozens	1,000 dollars	1,000 pots	1,000 dollars	1,000 pots	1,000 dollars	1,000 dollars
					STATE [1]				
1985	18.0	458	291	1,687	146	802	55	259	3,206
1986	18.0	488	314	2,115	235	982	30	187	[2] 4,051
1987	17.9	500	378	2,352	610	2,037	31	171	5,060
1988	19.8	536	417	2,639	447	1,841	34	178	5,194
1989	**24.9**	**709**	**435**	**2,798**	**421**	**1,995**	**34**	**165**	**5,667**
					OAHU				
1985	10.4	253	215	1,115	100	492	52	242	2,102
1986	11.0	305	196	1,375	106	505	29	181	[2] 2,644
1987	10.9	321	187	1,247	216	915	28	157	2,640
1988	10.0	289	213	1,413	182	755	15	77	2,534
1989	**13.6**	**410**	**200**	**1,392**	**227**	**1,130**	**17**	**78**	**3,010**

[1] Hawaii, Kauai, and Maui combined in State total to avoid disclosure of individual operations.
[2] Includes value of liners not shown separately.

DENDROBIUMS

DENDROBIUM ORCHIDS (POTTED PLANTS): Production area, 1985-89

Year	Glass or glass substitute	Saran	Natural shade or open field	Total	Intentions next year	Percent of current year
	1,000 square feet					
	STATE					
1985	254	466	152	872	1,022	117
1986	107	589	48	744	685	92
1987	230	420	20	670	900	134
1988	200	870	40	1,110	1,030	93
1989	**110**	**840**	**–**	**950**	**1,045**	**110**
	OAHU					
1985	130	350	17	497		
1986	26	392	48	466		
1987	60	375	22	457		
1988	43	511	26	580		
1989	**25**	**595**	**–**	**620**		

– = Less than 1/4 acre.

DENDROBIUM ORCHIDS (CUT SPRAYS AND BLOSSOMS): Production area, 1985-89

Year	Glass or glass substitute	Saran	Natural shade or open field	Total	Intentions next year	Percent of current year
	1,000 square feet					
	STATE					
1985	245	2,212	31	2,488	2,800	113
1986	281	2,239	65	2,585	2,900	112
1987	225	1,988	110	2,323	2,890	124
1988	220	2,495	80	2,795	2,955	106
1989	**270**	**2,650**	**220**	**3,140**	**3,360**	**107**
	OAHU					
1985	125	1,700	18	1,843		
1986	46	1,515	13	1,574		
1987	100	1,290	18	1,408		
1988	40	1,280	35	1,355		
1989	**70**	**1,330**	**–**	**1,400**		

– = Less than 1/4 acre.

DENDROBIUM ORCHIDS: Out-of-State sales, 1985-89

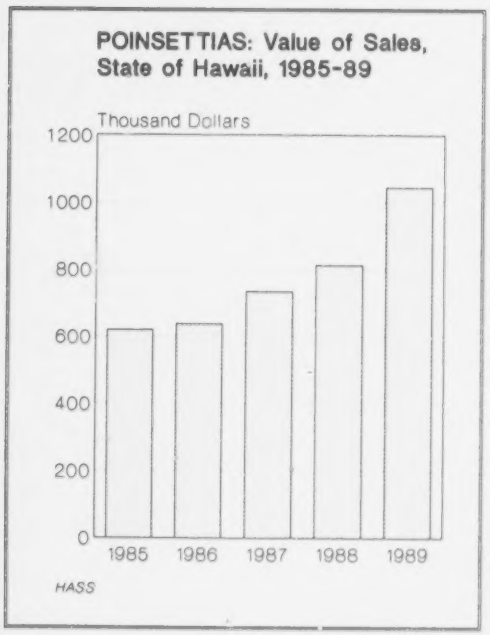
Year	Cut sprays		Potted plants [1]		Total value
	Number	Value	Number	Value	
	1,000 dozens	1,000 dollars	1,000 pots	1,000 dollars	
1985	152	1,031	107	645	1,676
1986	214	1,444	159	653	2,097
1987	244	1,840	469	2,040	3,880
1988	323	2,196	253	1,112	3,308
1989	**270**	**2,200**	**250**	**1,010**	**3,210**

[1] Includes community pots.

POINSETTIAS: Number of growers, pots sold by size, and value, 1985-89

Year	Growers	Pots sold by size				Value
		Under 5 inches	5-6 1/2 inches	All other sizes [1]	Total	
	Number					Dollars
	STATE					
1985	38	27,000	151,000	14,000	192,000	618,000
1986	29	44,000	131,000	15,000	190,000	636,000
1987	34	44,000	162,000	13,000	219,000	733,000
1988	39	57,000	170,000	--	227,000	813,000
1989	**38**	**52,000**	**213,000**	**--**	**265,000**	**1,045,000**

- = Less than 1,000.
[1] Includes hanging baskets.



POINSETTIAS: Percent of flowers grown by type of growing area, 1985-89

Year	Saran	Glass or glass substitute	Open field
1985	20	39	41
1986	23	39	38
1987	24	45	31
1988	29	40	31
1989	**29**	**36**	**35**

POINSETTIAS: Percent of flowers grown by varieties, 1985-89

Year	C-1	V-10	V-14	Others
1985	15	59	16	10
1986	19	59	11	11
1987	23	60	6	11
1988	7	64	8	21
1989	**11**	**68**	**7**	**14**

POINSETTIAS: 1989 intentions, with comparisons

Year	Grower intentions spring of year	Pots set [1]	Pots sold
	Number		
1985	NA	231,000	192,000
1986	NA	225,000	190,000
1987	NA	233,000	219,000
1988	234,000	265,000	227,000
1989	**277,000**	**290,000**	**265,000**

NA = Not available.
[1] Includes small pots eventually used for hanging baskets and counted as only one pot.

GINGER ROOT, FEED CROPS, SEED CORN

GINGER ROOT: Acreage, yield, production, price, and value, State of Hawaii, 1985-89

Year	Acreage harvested	Yield per acre	Production	Farm price	Value of sales
	Acres	1,000 pounds		Cents per pound	1,000 dollars
1985	125	43.4	5,425	82.3	4,465
1986	145	40.7	5,900	81.0	4,779
1987	215	46.7	10,050	45.0	4,523
1988	165	49.1	8,100	62.0	5,022
1989	**165**	**49.4**	**8,150**	**71.5**	**5,827**

GINGER ROOT: U. S. imports by product type, 1985-89

Product form	1985	1986	1987	1988	1989
	1,000 pounds				
Unground	12,344	11,541	10,245	10,088	**10,927**
Candied, glace, etc.	644	441	526	545	**556**
Ground, not candied	57	64	499	220	**1,036**
Total	**13,045**	**12,046**	**11,270**	**10,853**	**12,519**

Source: Economic Research Service, U. S. Department of Agriculture.

FEED CROPS: Acreage, production and value, State of Hawaii, 1985-89 [1]

Year	Acreage harvested	Production	Value [2]
	Acres	1,000 tons	1,000 dollars
1985	5,542	30.6	3,028
1986	2,317	16.0	1,155
1987	2,767	9.5	887
1988	4,021	8.8	803
1989	**1,301**	**4.8**	**321**

[1] Includes grains, grass and legume crops, and pineapple green chop.
[2] Includes value of production used on farm where produced.

SEED CORN: Number of farms, acreage used for crop, acreage harvested, outshipments, and value, State of Hawaii, 1985-89

Crop year November-June	Farms	Acreage used for crop	Acreage harvested			Outshipments of seed	Value
			Nursery	Observation	Seed increase		
	Number	Acres				1,000 pounds	1,000 dollars
1985-86	7	840	430	160	250	620	5,170
1986-87	7	800	420	125	255	535	5,070
1987-88	7	970	455	80	435	810	6,060
1988-89	7	1,080	470	75	535	1,060	6,440
1989-90	**7**	**960**	**480**	**85**	**395**	**1,055**	**6,120**

AVOCADOS: Number of farms, acreage, yield, production, price, and value, State of Hawaii, 1985-89

Year	Farms	Acreage [1]		Yield per acre (bearing)	Production	Farm price	Value of sales
		In crop	Bearing				
	Number	Acres		1,000 pounds		Cents per pound	1,000 dollars
1985	160	525	320	3.8	1,220	24.5	299
1986	160	540	330	3.9	1,300	25.6	333
1987	145	500	300	3.0	900	31.5	284
1988	145	580	290	4.1	1,200	36.5	438
1989	**140**	**550**	**250**	**4.4**	**1,100**	**38.0**	**418**

[1] At end of year.

COFFEE: Number of farms, acreage, yield, marketings, price, and value, State of Hawaii, 1985-89

Year [1]	Farms	Acreage		Marketings - parchment equivalent [2]				Green production
		In crop	Harvested	Yield per harvested acre	Marketings	Farm price	Value of sales	
	Number	Acres		1,000 pounds		Dollars per pound	1,000 dollars	1,000 pounds
1985-86	620	2,100	1,650	1.1	1,850	2.80	5,180	1,535
1986-87	620	2,300	2,000	1.5	3,000	2.90	8,700	2,400
1987-88	630	2,400	2,050	0.9	1,800	2.70	4,860	1,400
1988-89	635	2,600	2,150	0.9	2,000	3.30	6,600	1,600
1989-90	**635**	**3,000**	**2,300**	**1.0**	**2,200**	**4.05**	**8,910**	**1,800**

[1] Harvesting normally begins in September and extends to the early part of the following year.
[2] Coffee marketed in cherry form was converted to an equivalent parchment weight and added to parchment marketings to obtain total marketing.

MACADAMIA NUTS: Number of farms, acreage, yield, production, marketings, farm prices and value, 1985-89 seasons, State of Hawaii

Crop year [1]	Farms	Acreage		Yield per acre [2]	Production [3]		Average moisture		Farm prices [3]		Farm value [7]
		In crop	Bearing		Gross [4]	Net [5]	Entire crop	Purchases only	Gross [6]	Net	
	Number	Acres		1,000 pounds			Percent		Cents per pound		1,000 dollars
1985-86	610	20,900	13,500	3.1	44,700	42,000	19.7	21.5	68.1	72.5	30,450
1986-87	645	21,200	14,400	3.1	46,600	44,000	20.3	20.7	75.5	80.0	35,200
1987-88	650	21,500	15,600	2.7	45,600	42,700	19.0	20.3	78.7	84.0	35,868
1988-89	660	21,900	16,600	2.7	49,000	45,500	18.8	19.6	83.6	90.0	40,950
1989-90	**660**	**22,300**	**18,200**	**2.8**	**54,000**	**50,500**	**19.1**	**20.5**	**83.2**	**89.0**	**44,945**

[1] Season begins July 1st and ends June 30th of following year.
[2] Net production per bearing acre.
[3] Wet in-shell basis.
[4] Gross pounds delivered for processing.
[5] Gross pounds delivered for processing less total spoilage through cracking, but before roasting.
[6] Farm value divided by gross production.
[7] Net production multiplied by net farm price.

PINEAPPLES

PINEAPPLES: Number of farms, acreage, production, disposition, price, and value, State of Hawaii, 1985-89

Year	Farms	Acreage used for crop	Production (fresh weight)	Disposition		Farm price		Value of production (fresh weight)
				Processed (fresh weight)	Fresh market	Processed [1]	Fresh market [2]	
	Number	1,000 acres	1,000 tons			Dollars per ton		Thousand dollars
1985.....	18	34.5	565	441	124	90	410	90,530
1986.....	19	36.0	646	514	132	90	405	99,720
1987.....	12	36.1	692	558	134	91	362	99,286
1988.....	12	34.6	659	526	133	99	416	107,402
1989	**10**	**32.7**	**580**	**444**	**136**	**90**	**408**	**95,448**

[1] Estimate to reflect value of fresh fruit delivered processing plant door.
[2] Estimate to reflect value at wholesale establishments for local sales and shipper dock for mainland and foreign sales.

PINEAPPLES: Value of processed production, fresh sales and value, State of Hawaii, 1985-89

Year	Fresh market sales			Processor value of canned fruit and juice production [3]	Total value: Fresh market and processed [4]
	Quantity		Value [2]		
	Local	Shipped out-of-State [1]			
	1,000 tons		Thousand dollars	Million dollars	Million dollars
1985	17.5	106.5	50,840	171.7	222.5
1986	17.3	114.7	53,460	184.9	238.4
1987	17.5	116.5	48,508	202.9	251.4
1988	14.7	118.3	55,328	191.7	247.0
1989	**14.3**	**121.7**	**55,488**	**186.4**	**241.9**

[1] Market News Service, Hawaii Department of Agriculture. Includes all destinations.
[2] Value FAS shipping point for outshipments, delivered wholesalers local sales.
[3] Value of canned fruit and juices and by-product shipped out-of-State and sold within State.
[4] Pineapple Growers Association of Hawaii.

PINEAPPLES: Outshipments of fresh pineapples, State of Hawaii, 1985-89

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.	Total
	1,000 pounds												
1985.....	16,975	15,160	21,017	19,298	18,708	20,534	19,354	19,114	12,155	20,715	14,729	14,968	212,727
1986.....	16,882	18,091	19,400	22,639	24,632	18,348	20,922	17,947	17,213	19,656	17,384	16,231	229,345
1987.....	16,748	17,169	20,946	17,752	23,749	21,347	17,542	24,170	16,746	21,828	17,642	17,344	232,983
1988.....	15,645	16,370	24,146	21,975	20,904	22,811	21,672	17,011	19,087	19,155	19,561	18,325	236,662
1989	**17,564**	**19,577**	**24,470**	**22,582**	**23,739**	**20,799**	**18,545**	**18,714**	**18,506**	**18,756**	**21,012**	**19,187**	**243,451**

Source of outshipment data: Market News Service, Hawaii Department of Agriculture.

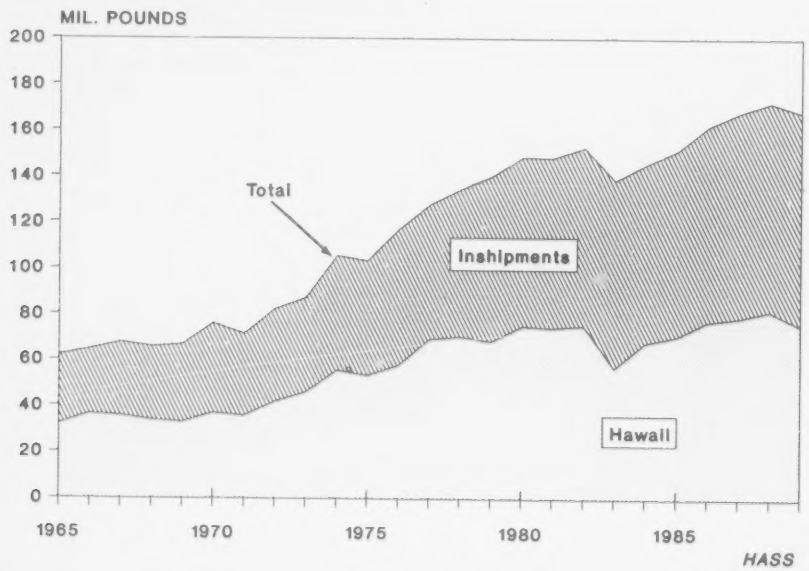
MARKET SUPPLY: Fresh market fruits, State of Hawaii, 1985-89 [1]

Commodity		1985	1986	1987	1988	1989	Hawaii market share 1989
		1,000 pounds					Percent
Apples:	Inshipments	12,463	13,282	14,269	14,610	13,602	
Avocados:	Inshipments	726	576	1,091	684	623	
	Hawaii	1,220	1,300	900	1,200	1,100	64
Bananas:	Inshipments	10,862	10,887	10,607	8,866	8,666	
	Hawaii	8,160	9,700	11,400	13,200	11,900	58
Cantaloupes:	Inshipments	5,893	5,881	6,200	7,203	8,371	
	Hawaii	--	[2]	[2]	[2]	[2]	
Grapefruit:	Inshipments	2,331	2,335	2,559	2,798	2,731	
Grapes:	Inshipments	6,707	7,366	7,474	8,272	7,888	
Honeydew melons:	Inshipments	4,141	5,023	5,492	5,513	6,023	
	Hawaii	--	--	--	[2]	[2]	
Lemons:	Inshipments	3,268	3,407	3,619	3,672	3,673	
Nectarines:	Inshipments	2,218	1,891	2,322	2,698	2,560	
Oranges:	Inshipments	17,593	19,347	17,570	17,050	16,937	
	Hawaii	340	450	[2]	[2]	[2]	
Papayas:	Hawaii [3]	16,200	16,075	15,910	16,875	18,400	100
Pears:	Inshipments	4,050	4,186	4,404	4,766	3,805	
Pineapples:	Hawaii	35,000	34,600	35,000	29,400	28,600	100
Tangerines:	Inshipments	465	423	476	420	755	
	Hawaii	50	75	70	30	30	4
Watermelons:	Inshipments	2,424	831	1,104	1,616	2,727	
	Hawaii	8,800	14,300	13,800	18,900	13,500	83
All other fruits:	Inshipments	6,411	6,472	7,626	8,258	8,696	
	Hawaii	460	415	1,455	1,845	1,690	16
Unspecified fruits:	Inshipments [4]	1,695	3,201	4,335	4,351	5,839	
Total:	Inshipments	81,247	85,108	89,148	90,777	92,896	
	Hawaii	70,230	76,915	78,535	81,450	75,220	45
	All	151,477	162,023	167,683	172,227	168,116	

-- = Negligible. [1] Excludes pineapples, guavas, papayas, and passion fruit used for processing, and quantities shipped out-of-State. [2] Data not shown separately to avoid disclosure of individual operations but combined and included with all other fruits. [3] Fresh intrastate sales only. Excludes mainland and foreign fresh sales. [4] Proration of shipments of unspecified mixed fruits destined for outlying islands.

Source of inshipment data: Market News Service, Hawaii Department of Agriculture

MARKET SUPPLY: Fresh Market Fruits, State of Hawaii, 1965-89



ORANGES, PASSION FRUIT, TANGERINES

ORANGES: Number of farms, acreage, yield, production, price, and value, State of Hawaii, 1985-89

Year	Farms	Acreage bearing [1]	Yield per acre	Production	Farm price	Value of sales
	Number	Acres	1,000 pounds		Cents per pound	1,000 dollars
1985	11	100	3.4	340	25.5	87
1986	12	100	4.5	450	25.4	114
1987 [2]						
1988 [2]						
1989 [2]						

[1] At end of year.
[2] Data not shown separately to avoid disclosure of individual operations but combined and included in fruits (excluding pineapples).

PASSION FRUIT: Number of farms, acreage, quantity processed, price, and value, State of Hawaii, 1985-89

Year	Farms	Cultivated acreage [1]		Quantity processed [2]	Average price	Value of sales [2]
		In crop	Bearing			
	Number	Acres		1,000 pounds	Cents per pound	1,000 dollars
1985	19	60	25	820	12.3	101
1986	11	45	35	550	12.3	68
1987	19	30	20	560	12.0	67
1988	22	66	26	700	13.7	96
1989	16	25	20	360	13.4	48

[1] At end of year.
[2] Includes wild and cultivated production.

TANGERINES: Number of farms, acreage, yield, production, price, and value, State of Hawaii, 1985-89

Year	Farms	Acreage bearing [1]	Yield per acre	Production	Farm price	Value of sales
	Number	Acres	1,000 pounds		Cents per pound	1,000 dollars
1985	9	15	3.3	50	35.1	18
1986	13	15	5.0	75	36.3	27
1987	11	15	4.7	70	32.5	23
1988	9	7	4.3	30	38.0	11
1989	7	8	3.8	30	40.0	12

[1] At end of year.

GUAVAS: Total processed, farm production, number of farms, acreage, price, and value, State of Hawaii, 1985-89

Year	Total delivered to processors [1]			Farm production					
	Quantity processed	Average price	Value of sales	Farms	Acreage in crop	Acreage harvested	Production	Farm price	Value of sales
	1,000 pounds	Cents per pound	1,000 dollars	Number	Acres		1,000 pounds	Cents per pound	1,000 dollars
					STATE				
1985.....	9,530	10.2	972	100	920	680	8,890	10.2	907
1986.....	17,130	10.5	1,799	100	990	690	16,560	10.5	1,739
1987.....	18,050	12.0	2,166	110	[2] 1,070	710	17,450	12.0	2,094
1988.....	19,000	13.4	2,546	105	[2] 1,120	865	18,560	13.4	2,487
1989....	**20,900**	**15.0**	**3,135**	**110**	**[2] 1,180**	**965**	**20,600**	**15.0**	**3,090**
					HAWAII				
1985.....	3,170	10.0	317	91	330	200	3,050	10.0	305
1986.....	5,210	10.5	547	90	340	210	5,130	10.5	539
1987.....	5,450	12.0	654	98	[2] 420	210	5,260	12.0	631
1988.....	6,550	13.4	878	95	[2] 465	210	6,530	13.4	875
1989....	**7,300**	**15.0**	**1,095**	**100**	**[2] 525**	**310**	**7,240**	**15.0**	**1,086**
					KAUAI/MAUI/MOLOKAI/OAHU [3]				
1985.....	6,360	10.3	655	9	590	480	5,840	10.3	602
1986.....	11,920	10.5	1,252	10	650	480	11,430	10.5	1,200
1987.....	12,600	12.0	1,512	12	[2] 650	500	12,190	12.0	1,463
1988.....	12,450	13.4	1,668	10	[2] 655	655	12,030	13.4	1,612
1989....	**13,600**	**15.0**	**2,040**	**10**	**[2] 655**	**655**	**13,360**	**15.0**	**2,004**

[1] Fruit allocated to island of production not island where processed. Includes wild and cultivated production.
[2] Includes planting intentions.
[3] Kauai, Maui, Molokai and Oahu are combined to avoid disclosure of individual operations.

GUAVAS: Quantity, price, and value, State of Hawaii, 1985-89

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.	Annual Total [1]	Average price [2]	Value
	1,000 pounds													Cents per lb.	1,000 dollars
1985.....	345	235	155	320	490	425	480	1,040	1,840	1,255	1,840	1,105	9,530	10.2	972
1986.....	1,345	945	450	360	690	525	570	1,865	4,855	3,695	1,070	760	17,130	10.5	1,799
1987.....	313	409	422	228	392	1,006	1,750	1,904	3,323	4,484	2,509	1,310	18,050	12.0	2,166
1988.....	614	491	754	363	163	226	994	2,858	3,724	3,344	2,843	2,626	19,000	13.4	2,546
1989....	**1,530**	**990**	**575**	**550**	**1,090**	**1,280**	**850**	**1,970**	**3,640**	**3,510**	**2,850**	**2,065**	**20,900**	**15.0**	**3,135**

[1] Sum of monthly estimates may not add to annual total due to rounding.
[2] Equivalent F.O.B. plant, island of production. Prices for guavas are averages for wild and cultivated fruit.

GUAVAS: U.S. Imports by product type, 1985-89

Product form	1985	1986	1987	1988	1989
	1,000 pounds				
Classifications used up to 1988: [1]					
Guava paste and pulp	8,452	13,876	9,546	14,442	–
Guava prepared, preserved, not specifically provided for	1,138	1,612	2,546	1,539	–
Guava jam and jelly	1,373	767	1,041	1,409	–
Guava freeze-dried, pickled, brine	11	11	123	63	–
Total	10,974	16,266	13,256	17,453	–
Classifications effective January 1, 1989: [2]					
Guava, Mangoes and Mangosteens, fresh	–	–	–	–	46,083
Guava and Mango pastes and puree	–	–	–	–	32,215
Guavas, prepared or preserved whether or not containing added sugar or other sweetening matter	–	–	–	–	4,132
Guava jams	–	–	–	–	687
Guavas, Mangoes and Mangosteens, dried	–	–	–	–	372
Total	–	–	–	–	83,489

– = Not available.
[1] Source of data: Economic Research Service, U.S. Department of Agriculture
[2] Source of data: U.S. Department of Commerce.

BANANAS

BANANAS: Number of farms, acreage, yield, production, price, and value, by islands, 1985-89

Year	Farms	Acreage		Yield per acre (harvested)	Production	Farm price	Value of sales
		In crop [1]	Harvested				
	Number	Acres		1,000 pounds		Cents per pound	1,000 dollars
				STATE [2]			
1985	178	1,060	840	9.7	8,160	30.3	2,472
1986	185	1,140	980	9.9	9,700	30.0	2,910
1987	175	1,220	1,070	10.7	11,400	29.7	3,386
1988	160	1,220	1,070	12.3	13,200	33.0	4,356
1989	**150**	**1,150**	**1,000**	**11.9**	**11,900**	**36.5**	**4,344**
				HAWAII			
1985	35	385	260	12.5	3,240	27.5	891
1986	41	440	370	9.5	3,500	28.0	980
1987	32	480	380	14.8	5,610	29.1	1,633
1988	28	505	410	20.1	8,245	32.2	2,655
1989	**24**	**465**	**415**	**17.3**	**7,190**	**35.0**	**2,517**
				KAUAI			
1985	34	155	145	13.7	1,990	26.5	527
1986	40	155	135	15.3	2,070	25.9	536
1987	38	145	145	13.5	1,960	25.1	492
1988	30	90	85	9.8	835	33.5	280
1989	**26**	**80**	**45**	**13.3**	**600**	**37.1**	**223**
				MAUI/MOLOKAI			
1985	19	65	45	7.2	325	29.2	95
1986	16	70	50	10.0	500	30.6	153
1987	12	70	70	4.6	320	34.3	110
1988	12	65	60	6.8	410	32.6	134
1989	**12**	**65**	**50**	**10.2**	**510**	**37.0**	**189**
				OAHU			
1985	90	455	390	6.7	2,605	36.8	959
1986	88	475	425	8.5	3,630	34.2	1,241
1987	93	525	475	7.4	3,510	32.8	1,151
1988	90	560	515	7.2	3,710	34.7	1,287
1989	**88**	**540**	**490**	**7.3**	**3,600**	**39.3**	**1,415**

[1] As of February following year, i.e., acreage data shown for 1989 is as of February 1, 1990.
[2] Island totals may not add to State totals due to rounding.

BANANAS: Acreage by variety, State of Hawaii, February 1, 1990

Island	Variety					
	Brazilian [1]	Bluefields [2] (Gros Michel)	Cavendish			Others [5]
			Chinese	Williams Hybrid [3]	Valery [4]	
Hawaii	40	*	*	375	50	0
Kauai	25	15	5	35	*	*
Maui/Molokai	15	10	0	40	*	*
Oahu	405	*	10	110	*	15
Total	**485**	**25**	**15**	**560**	**50**	**15**

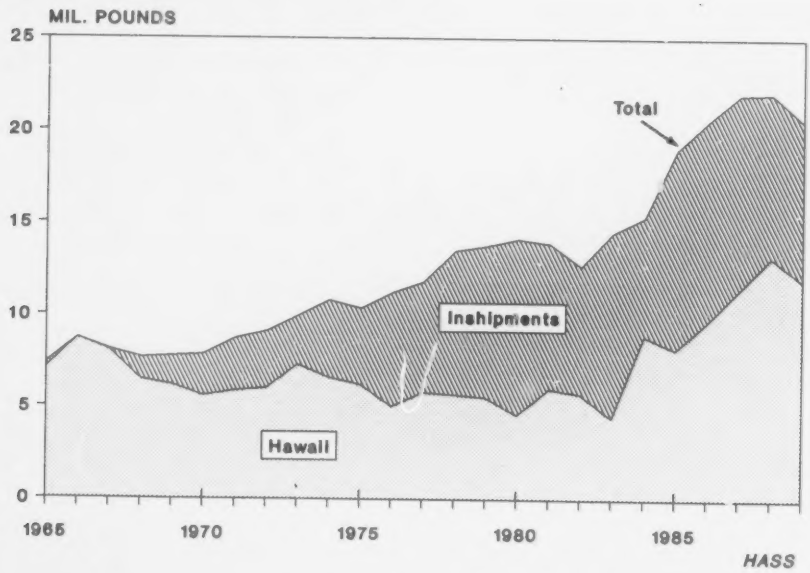
* = Less than 5 acres. [1] Includes dwarf Brazilian and Apple bananas. [2] Includes dwarf Bluefields. [3] Includes Grand Naim. [4] Includes Robusta. [5] Includes cooking and Lady Finger.

BANANAS: Monthly production, total acreage in crop, and total acreage harvested, by varieties, and price, State of Hawaii, 1985-89

Year	Production													Acreage	
	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.	Total or average	In crop	Harvested
	1,000 pounds													Acres	
BRAZILIAN [1]															
1985	122	73	97	86	80	81	135	249	257	248	228	214	1,870	380	320
1986	166	150	135	143	158	139	151	186	204	193	194	211	2,030	420	365
1987	151	117	150	136	138	137	149	152	171	202	211	206	1,920	465	405
1988	174	190	215	165	160	181	203	252	251	258	249	232	2,530	510	465
1989	**190**	**189**	**203**	**176**	**182**	**244**	**215**	**254**	**251**	**252**	**246**	**238**	**2,640**	**485**	**435**
BLUEFIELDS (GROS MICHEL) [2]															
1985	32	28	18	20	17	21	29	25	28	25	22	25	290	45	40
1986	24	19	20	15	17	16	24	30	23	18	20	14	240	35	30
1987	15	11	10	10	10	9	9	13	9	9	8	7	120	30	30
1988	8	8	7	8	8	8	9	8	9	9	9	9	100	25	20
1989	**7**	**8**	**9**	**8**	**11**	**10**	**11**	**9**	**7**	**6**	**8**	**6**	**100**	**25**	**10**
CAVENDISH [3]															
1985	453	392	346	345	332	471	611	614	591	641	609	595	6,000	605	465
1986	556	497	507	437	510	529	624	586	642	857	870	815	7,430	665	565
1987	750	687	755	632	540	703	859	946	804	811	855	1,018	9,360	705	615
1988	895	775	801	741	687	837	932	959	872	1,143	919	1,009	10,570	660	560
1989	**676**	**560**	**517**	**542**	**559**	**695**	**950**	**1,068**	**901**	**794**	**941**	**957**	**9,160**	**625**	**540**
FARM PRICE FOR FRESH MARKET															
	Cents per pound														
1985	30.4	30.0	30.7	31.0	30.9	30.4	30.0	32.0	31.5	29.3	29.0	29.1	30.3		
1986	29.1	29.1	29.2	30.7	30.6	30.5	29.9	30.5	30.6	29.7	29.8	30.3	30.0		
1987	29.9	29.1	29.3	30.8	30.7	30.2	28.9	29.3	29.2	29.8	30.1	29.8	29.7		
1988	28.9	32.0	33.1	33.0	33.9	34.6	33.9	32.8	33.4	33.3	33.5	33.6	33.0		
1989	**34.7**	**37.1**	**37.4**	**40.1**	**38.8**	**39.5**	**35.9**	**35.5**	**35.2**	**35.4**	**35.7**	**35.6**	**36.5**		

[1] Includes dwarf Brazilian and Apple bananas. [2] Includes dwarf Bluefields. [3] Includes Chinese, Williams Hybrid, Valery, and Grand Naim.

MARKET SUPPLY: Fresh Market Bananas, State of Hawaii, 1965-89



PAPAYAS

PAPAYAS: Number of farms, acreage, yield, utilization, price, and value, by islands, 1985-89 [1]

Year	Farms [2]	Acreage harvested [2]	Yield per acre [3]	Utilized production	Utilization		Price per pound			Value of utilized production
					Fresh	Processed	Fresh	Processed [4]	All	
	Number	Acres	1,000 pounds				Cents			1,000 dollars
					STATE					
1985	315	2,650	22.8	60,400	49,250	11,150	16.9	2.3	14.2	8,579
1986	311	2,355	25.9	61,000	50,100	10,900	21.7	2.3	18.2	11,123
1987	293	2,350	28.5	67,000	56,000	11,000	19.3	2.2	16.5	11,050
1988	305	2,300	30.0	69,000	57,000	12,000	21.0	3.2	17.9	12,354
1989	**325**	**2,500**	**29.6**	**74,000**	**64,000**	**10,000**	**22.0**	**3.0**	**19.4**	**14,380**
					HAWAII					
1985	238	2,350	23.6	55,375	44,285	11,090	16.4		13.6	7,506
1986	241	2,178	26.3	57,270	46,510	10,760	21.6		18.0	10,274
1987	231	2,183	28.9	63,095	52,430	10,665	19.0		16.1	10,173
1988	250	2,172	30.6	66,358	54,635	11,723	20.7		17.6	11,656
1989	**277**	**2,373**	**30.4**	**72,068**	**62,080**	**9,988**	**21.8**		**19.2**	**13,825**
					KAUAI					
1985	36	215	15.7	3,365	3,365	0	[5] 19.3		[5] 19.3	[5] 662
1986	30	112	20.0	2,240	2,240	0	[5] 22.5		[5] 22.5	[5] 530
1987	24	98	21.6	2,115	2,035	80	[5] 21.8		[5] 21.1	[5] 468
1988	20	70	19.9	1,394	1,370	24	[6] 28.9		[6] 26.4	[5] 376
1989	**18**	**65**	**15.1**	**982**	**970**	**[6] 12**	**[6] 28.9**		**[6] 28.7**	**[5] 289**
					MAUI/MOLOKAI					
1985	4	5	13.0	65	65	0	[5]		[5]	[5]
1986	6	8	14.4	115	115	0	[5]		[5]	[5]
1987	6	8	13.1	105	105	0	[5]		[5]	[5]
1988	5	8	7.5	60	60	0	[6]		[6]	[5]
1989	**4**	**16**	**9.7**	**155**	**155**	[6]	[6]		[6]	[5]
					OAHU					
1985	37	80	19.9	1,595	1,535	60	26.7		25.8	411
1986	34	57	24.1	1,375	1,235	140	25.6		23.2	319
1987	32	61	27.6	1,685	1,430	255	28.2		24.3	409
1988	30	50	23.8	1,188	935	253	[6]		[6]	322
1989	**26**	**46**	**17.3**	**795**	**795**	[6]	[6]		[6]	**266**

[1] Sum of island estimates may not add to State total due to rounding.
[2] Average of monthly estimates.
[3] Utilized production divided by acreage harvested.
[4] Island data not shown separately to avoid disclosure of individual operations.
[5] Maui and Molokai combined with Kauai to avoid disclosure of individual operations.
[6] Oahu, Maui and Molokai combined with Kauai to avoid disclosure of individual operations.

PAPAYAS: Acreage, utilization, price, and outshipments, State of Hawaii, 1985-89

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.	Total or average
						Area harvested – Acres [1]							
1985.....	2,810	2,920	2,890	2,820	2,820	2,695	2,725	2,625	2,345	2,410	2,385	2,395	2,650
1986.....	2,430	2,485	2,405	2,390	2,380	2,365	2,310	2,250	2,340	2,375	2,265	2,270	2,355
1987.....	2,420	2,395	2,400	2,330	2,310	2,300	2,330	2,350	2,345	2,325	2,445	2,240	2,350
1988.....	2,175	2,225	2,200	2,175	2,325	2,220	2,290	2,310	2,410	2,375	2,420	2,410	2,300
1989	**2,450**	**2,295**	**2,360**	**2,345**	**2,410**	**2,480**	**2,495**	**2,505**	**2,550**	**2,625**	**2,735**	**2,745**	**2,500**
						Utilization (fresh and processed) – 1,000 pounds							
1985.....	4,704	5,544	5,642	4,531	4,389	4,249	6,944	5,446	4,561	5,634	4,838	3,918	60,400
1986.....	4,565	4,890	5,545	5,605	5,845	4,875	5,480	4,055	3,655	6,480	4,885	5,120	61,000
1987.....	4,540	4,310	4,010	4,720	5,100	5,895	6,040	5,865	5,830	6,770	7,140	6,780	67,000
1988.....	4,525	3,300	3,290	4,710	5,315	5,715	6,740	6,160	7,255	7,730	7,105	7,155	69,000
1989	**5,355**	**4,980**	**5,760**	**6,900**	**6,420**	**6,580**	**6,110**	**6,210**	**5,865**	**6,760**	**6,905**	**6,155**	**74,000**
						Total fresh papaya utilization – 1,000 pounds							
1985.....	4,267	4,400	4,791	4,079	3,914	3,619	5,134	3,989	3,722	4,594	3,383	3,358	49,250
1986.....	3,925	3,970	4,215	4,295	4,910	3,700	4,140	3,425	3,120	5,805	4,155	4,440	50,100
1987.....	4,000	3,665	3,465	4,125	4,175	4,525	4,785	4,660	4,770	5,900	5,940	5,990	56,000
1988.....	4,030	3,000	3,100	4,340	4,340	4,580	5,470	4,930	5,820	5,835	5,665	5,890	57,000
1989	**4,425**	**4,165**	**4,830**	**5,945**	**5,475**	**5,645**	**5,130**	**5,290**	**5,165**	**6,130**	**6,270**	**5,530**	**64,000**
						Intrastate fresh papaya utilization – 1,000 pounds							
1985.....	1,697	1,676	1,427	1,225	1,320	1,123	1,352	1,049	1,125	1,585	1,371	1,250	16,200
1986.....	1,490	1,530	1,531	1,436	1,495	1,047	1,378	1,075	1,034	1,513	1,111	1,435	16,075
1987.....	1,203	1,160	960	1,372	1,225	1,197	1,277	1,381	1,467	1,622	1,469	1,577	15,910
1988.....	1,165	971	1,034	1,360	1,443	1,415	1,532	1,548	1,559	1,593	1,638	1,617	16,875
1989	**1,489**	**1,426**	**1,450**	**1,830**	**1,574**	**1,339**	**1,513**	**1,518**	**1,415**	**1,895**	**1,642**	**1,309**	**18,400**
						Outshipments of fresh papayas – 1,000 pounds							
1985.....	2,570	2,724	3,364	2,854	2,594	2,496	3,782	2,940	2,597	3,009	2,012	2,108	33,050
1986.....	2,435	2,440	2,684	2,859	3,415	2,653	2,762	2,350	2,086	4,292	3,044	3,005	34,025
1987.....	2,797	2,505	2,505	2,753	2,950	3,328	3,508	3,279	3,303	4,278	4,471	4,413	40,090
1988.....	2,865	2,029	2,066	2,980	2,897	3,165	3,938	3,382	4,261	4,242	4,027	4,273	40,125
1989	**2,936**	**2,739**	**3,380**	**4,115**	**3,901**	**4,306**	**3,617**	**3,772**	**3,750**	**4,235**	**4,628**	**4,221**	**45,600**
						Farm price for fresh market sales (to all markets) – Cents per pound							
1985.....	16.2	17.1	18.0	19.7	21.0	21.1	17.0	14.0	14.4	14.7	14.8	15.1	16.9
1986.....	22.1	23.1	23.9	23.5	27.4	21.2	20.9	22.1	25.6	18.7	14.5	19.2	21.7
1987.....	19.4	20.7	27.0	27.6	24.4	21.4	18.6	17.3	16.7	16.2	15.1	15.0	19.3
1988.....	18.9	28.6	39.2	36.0	22.8	20.4	18.8	18.2	16.3	15.3	14.9	16.8	21.0
1989	**22.0**	**25.4**	**27.7**	**29.0**	**25.3**	**21.1**	**20.7**	**21.6**	**19.8**	**20.0**	**16.2**	**16.9**	**22.0**

[1] Total is average of monthly data.

MARKET SUPPLY: FRESH VEGETABLES

MARKET SUPPLY: Fresh market vegetables, State of Hawaii, 1985-89

Commodity		1985	1986	1987	1988	1989	Hawaii market share 1989
		1,000 pounds					Percent
Beans, snap:	Inshipments	148	330	416	337	339	
	Hawaii	1,250	980	890	950	1,000	75
Bittermelon:	Inshipments	4	8	10	21	32	
	Hawaii	210	300	220	180	140	81
Broccoli:	Inshipments	4,461	5,376	5,695	6,024	6,424	
	Hawaii	960	790	675	550	460	7
Burdock:	Inshipments	4	1	1	6	32	
	Hawaii	750	510	580	450	400	93
Cabbage, Chinese:	Inshipments	55	102	76	247	157	
	Hawaii [1]	6,970	5,810	6,700	7,000	6,300	98
Cabbage, head:	Inshipments	199	289	184	628	284	
	Hawaii	13,300	14,000	14,950	15,620	15,750	98
Cabbage, mustard:	Inshipments	56	62	61	147	358	
	Hawaii	1,520	1,600	1,450	1,260	1,000	74
Carrots:	Inshipments	9,137	9,624	10,254	10,607	11,119	
	Hawaii	200	160	80	30	30	--
Cauliflower:	Inshipments	1,185	1,575	1,961	1,944	2,083	
	Hawaii	850	710	320	480	550	21
Celery:	Inshipments	4,026	4,909	5,141	5,553	5,807	
	Hawaii	3,450	2,680	2,730	2,200	2,000	26
Corn, sweet:	Inshipments	382	767	865	973	839	
	Hawaii	1,060	1,040	1,480	660	1,020	55
Cucumbers:	Inshipments	1,708	2,024	1,732	1,702	2,152	
	Hawaii	4,200	3,720	3,960	3,950	3,500	62
Daikon:	Inshipments	50	23	19	41	46	
	Hawaii [1]	3,040	3,330	3,130	2,610	2,800	98
Dasheen:	Inshipments	10	8	12	43	30	
	Hawaii	210	200	155	220	120	80
Eggplant:	Inshipments	133	196	308	337	324	
	Hawaii	1,340	1,300	1,290	1,180	1,160	78
Ginger root:	Inshipments	264	329	210	300	251	
	Hawaii	5,425	5,900	10,050	8,100	8,150	97
Lettuce:	Inshipments	16,021	16,519	17,196	19,925	21,339	
	Hawaii	9,400	8,700	7,000	4,500	3,300	13
Lotus root:	Inshipments	18	13	8	18	22	
	Hawaii	185	150	145	190	180	89
Onions, dry:	Inshipments	14,016	15,679	15,530	17,070	16,429	
	Hawaii	1,890	1,480	1,980	1,420	1,250	7
Onions, green:	Inshipments	204	184	232	307	390	
	Hawaii	1,410	1,440	1,220	1,240	1,400	78
Parsley, American:	Inshipments	37	44	64	75	103	
	Hawaii	310	320	310	280	320	76
Peas, Chinese:	Inshipments	305	336	280	294	291	
	Hawaii	80	70	70	55	10	3
Peppers, green:	Inshipments	1,788	1,392	1,595	2,634	2,974	
	Hawaii	1,480	2,050	2,300	1,430	1,370	32
Potatoes:	Inshipments [2]	40,916	43,170	42,777	42,777	41,676	
	Hawaii	--	--	--	--	--	--
Pumpkins:	Inshipments	1,087	1,088	1,040	1,262	1,094	
	Hawaii	260	200	140	95	40	4
Radish:	Inshipments	4	14	15	2	2	
	Hawaii	310	205	320	325	210	99

See footnotes at end of table.

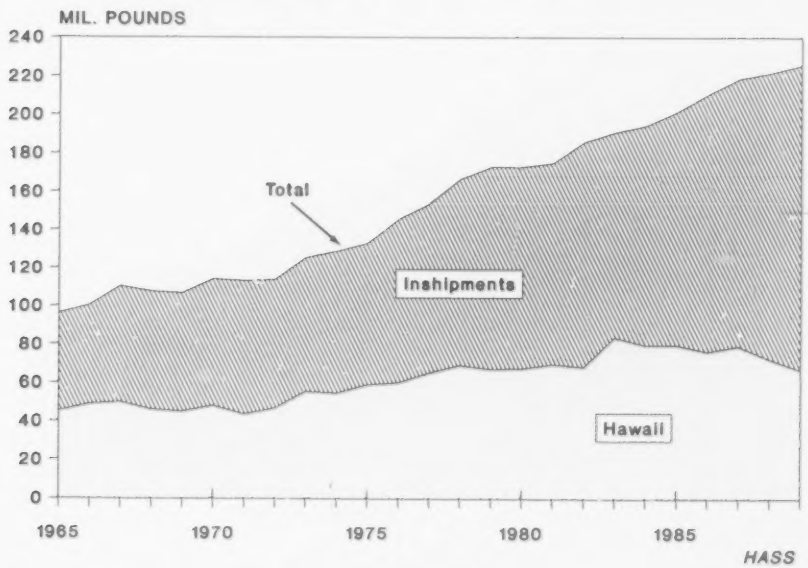
Continued

MARKET SUPPLY: Fresh market vegetables, State of Hawaii, 1985-89 -- Continued

Commodity		1985	1986	1987	1988	1989	Hawaii market share 1989
		1,000 pounds					Percent
Romaine:	Inshipments	1,332	1,673	1,951	2,868	**3,521**	
	Hawaii	2,520	2,300	1,860	1,680	**1,600**	31
Squash, Italian:	Inshipments	1,015	1,125	1,177	1,200	**1,804**	
	Hawaii	1,160	1,030	1,000	1,040	**610**	25
Squash, Oriental:	Inshipments	101	143	83	121	**168**	
	Hawaii	490	400	315	350	**230**	58
Sweetpotatoes:	Inshipments	719	676	799	823	**968**	
	Hawaii	1,910	2,100	1,600	1,540	**1,250**	56
Taro:	Inshipments	1,013	667	917	615	**729**	
	Hawaii [1]	590	490	570	600	**500**	41
Tomatoes:	Inshipments	9,824	11,234	11,378	11,997	**15,307**	
	Hawaii	7,800	6,700	7,000	7,000	**5,500**	26
Watercress:	Inshipments	0	9	22	4	**0**	
	Hawaii	1,530	1,200	1,230	1,200	**1,250**	100
All other vegetables:	Inshipments	8,728	9,488	10,696	11,545	**12,775**	
	Hawaii	3,570	4,350	4,400	3,950	**3,200**	20
Unspecified vegetables:	Inshipments [3]	2,652	5,007	6,780	6,804	**9,134**	
Total:	Inshipments	121,602	134,084	139,485	149,251	**159,003**	
	Hawaii	79,630	76,215	80,120	72,335	**66,600**	30
	All	201,232	210,299	219,605	221,586	**225,603**	

– = Negligible.
[1] Fresh market only. [2] For processing and fresh market. (Potato production for Hawaii included with all other vegetables for Hawaii to avoid disclosure.) [3] Proration of shipments of unspecified mixed vegetables destined for outlying islands.
Source of inshipment data: Market News Service, Hawaii Department of Agriculture.

MARKET SUPPLY: Fresh Market Vegetables, State of Hawaii, 1965-89



SNAP BEANS

SNAP BEANS: Acreage, yield, production, price, and value, by islands, 1985-89

Year	Acreage harvested	Yield per acre	Production	Farm price	Value of sales
	Acres	1,000 pounds		Cents per pound	1,000 dollars
			STATE [1]		
1985	160	7.8	1,250	77.2	965
1986	130	7.5	980	77.2	757
1987	150	5.9	890	74.3	661
1988	160	5.9	950	78.6	747
1989	**180**	**5.6**	**1,000**	**83.7**	**837**
			HAWAII/KAUAI [2]		
1985	20	6.0	120	74.1	89
1986	20	5.0	100	73.5	74
1987	25	4.4	110	63.3	70
1988	25	4.2	105	79.1	83
1989	**35**	**3.7**	**130**	**81.3**	**106**
			MAUI/MOLOKAI		
1985	90	8.3	750	73.7	553
1986	60	9.0	540	72.2	390
1987	85	6.2	530	73.8	391
1988	110	6.5	715	78.2	559
1989	**130**	**6.1**	**790**	**83.3**	**658**
			OAHU		
1985	50	7.6	380	85.0	323
1986	50	6.8	340	86.1	293
1987	40	6.3	250	80.0	200
1988	25	5.2	130	80.5	105
1989	**15**	**5.3**	**80**	**91.7**	**73**

[1] Sum of island estimates may not add to State total due to rounding.
[2] Kauai combined with Hawaii to avoid disclosure of individual operations.

SNAP BEANS: Acreage, production, and price, State of Hawaii, 1985-89

Month	Acreage harvested [1]					Production [2]					Farm price				
	1985	1986	1987	1988	1989	1985	1986	1987	1988	1989	1985	1986	1987	1988	1989
	Acres					1,000 pounds					Cents per pound				
January	15	13	11	13	18	122	94	61	48	78	82.2	79.5	69.2	83.2	86.2
February	12	16	9	11	14	102	105	65	59	78	86.6	79.2	76.0	84.3	85.1
March	20	16	10	14	22	107	112	84	91	113	80.8	77.2	80.6	81.8	86.3
April	14	16	12	16	17	122	98	100	89	89	78.0	78.7	69.6	72.3	76.2
May	16	14	18	14	22	119	106	97	94	91	71.5	80.6	64.4	71.3	78.6
June	14	15	19	16	15	120	103	109	82	82	71.0	77.7	70.4	74.8	82.9
July	12	13	21	12	18	102	70	95	82	63	66.4	84.3	74.6	74.1	83.8
August	11	9	22	13	14	80	44	70	94	67	73.9	80.5	76.5	75.2	86.2
September	10	9	13	16	19	82	61	75	73	98	78.4	68.4	83.3	80.6	86.1
October	10	11	10	17	16	106	64	52	74	79	80.5	69.7	76.5	83.4	82.8
November	9	10	16	15	19	99	48	47	73	86	71.0	72.7	79.3	82.6	84.4
December	13	12	11	21	18	80	75	35	91	76	88.5	72.0	82.4	85.7	87.0
Total or average	160	130	150	160	180	1,250	980	890	950	1,000	77.2	77.2	74.3	78.6	83.7

[1] Sum of monthly data exceeds total because harvest period longer than 1 month.
[2] Sum of monthly estimates may not add to annual total due to rounding.

CHINESE CABBAGE: Acreage, yield, production, price, and value, by islands, 1985-89

Year	Acreage harvested	Yield per acre	Production	Farm price	Value of sales
	Acres	1,000 pounds		Cents per pound	1,000 dollars
			STATE [1]		
1985	370	22.4	8,300	13.6	1,129
1986	350	20.6	7,200	14.2	1,022
1987	400	20.0	8,000	15.9	1,272
1988	450	18.4	8,300	17.3	1,436
1989	**430**	**17.9**	**7,700**	**21.4**	**1,648**
			HAWAII		
1985	330	22.7	7,480	13.0	972
1986	330	20.6	6,800	14.1	959
1987	330	21.0	6,920	15.6	1,080
1988	325	19.7	6,400	17.0	1,088
1989	**300**	**17.7**	**5,300**	**21.0**	**1,113**
			KAUAI/MAUI/OAHU [2]		
1985	40	20.5	820	19.1	157
1986	20	20.0	400	15.8	63
1987	70	15.4	1,080	17.8	192
1988	125	15.2	1,900	18.3	348
1989	**130**	**18.5**	**2,400**	**22.3**	**535**

[1] Sum of island estimates may not add to State total due to rounding.
[2] Kauai and Oahu combined with Maui to avoid disclosure of individual operations.

CHINESE CABBAGE: Acreage, production, and price, State of Hawaii, 1985-89

Month	Acreage harvested [1]					Processing and fresh market									
						Production					Farm price				
	1985	1986	1987	1988	1989	1985	1986	1987	1988	1989	1985	1986	1987	1988	1989
	Acres					1,000 pounds					Cents per pound				
January	30	28	31	36	44	685	580	618	574	648	21.3	12.7	15.4	23.5	23.1
February	38	28	37	45	42	776	759	731	806	728	17.6	13.9	14.7	16.7	22.7
March	43	37	39	50	36	955	778	1,088	1,117	652	15.0	13.5	14.2	14.3	21.4
April	38	33	33	52	40	1,211	613	874	873	744	12.5	14.2	12.4	13.2	20.8
May	28	27	31	39	38	539	547	585	577	660	11.8	14.9	11.3	12.4	19.0
June	28	30	31	34	35	579	518	577	642	658	11.5	14.2	11.6	14.3	20.3
July	29	29	31	30	38	590	571	545	560	656	11.4	12.5	17.2	15.9	21.7
August	27	27	28	35	26	609	569	563	519	567	12.5	13.2	19.9	20.0	23.5
September	29	22	31	27	31	520	492	601	649	656	14.0	14.1	18.6	21.1	22.6
October	27	27	29	35	35	584	521	623	607	544	11.6	17.2	18.4	20.0	19.5
November	30	31	36	34	32	603	576	589	643	572	11.0	15.7	19.0	19.9	21.1
December	23	31	43	33	33	649	676	606	733	615	11.0	14.8	21.5	20.2	20.9
Total or average	370	350	400	450	430	8,300	7,200	8,000	8,300	7,700	13.6	14.2	15.9	17.3	21.4

[1] Sum of monthly estimates may not add to annual total due to rounding.

HEAD CABBAGE

HEAD CABBAGE: Acreage, yield, production, price, and value, by islands, 1985-89

Year	Acreage harvested	Yield per acre	Production	Farm price	Value of sales
	Acres	1,000 pounds		Cents per pound	1,000 dollars
			STATE [1]		
1985	460	28.9	13,300	16.3	2,168
1986	490	28.6	14,000	15.5	2,170
1987	510	29.3	14,950	14.6	2,183
1988	560	27.9	15,620	16.4	2,562
1989	**650**	**24.2**	**15,750**	**17.9**	**2,819**
			HAWAII/KAUAI/OAHU [2]		
1985	130	22.7	2,950	14.9	440
1986	150	20.1	3,020	14.4	435
1987	150	20.0	3,000	15.0	450
1988	150	19.3	2,890	16.0	462
1989	**165**	**17.6**	**2,900**	**17.0**	**493**
			MAUI		
1985	330	31.4	10,350	16.7	1,728
1986	340	32.3	10,980	15.8	1,735
1987	360	33.2	11,950	14.5	1,733
1988	410	31.0	12,730	16.5	2,100
1989	**485**	**26.5**	**12,850**	**18.1**	**2,326**

[1] Sum of island estimates may not add to State total due to rounding.
[2] Kauai and Oahu combined with Hawaii to avoid disclosure of individual operations.

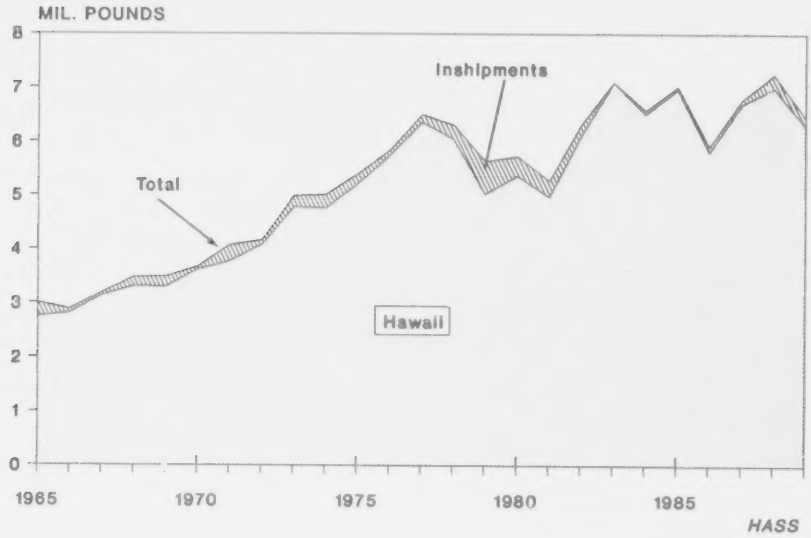
HEAD CABBAGE: Acreage, production, and price, State of Hawaii, 1985-89

Month	Acreage harvested [1]					Production [1]					Farm price				
	1985	1986	1987	1988	1989	1985	1986	1987	1988	1989	1985	1986	1987	1988	1989
	Acres					1,000 pounds					Cents per pound				
January	32	42	43	46	**58**	1,130	1,232	1,205	1,096	**1,163**	18.1	13.6	14.5	21.3	**18.6**
February	36	42	43	45	**54**	1,053	1,166	1,265	1,289	**1,283**	17.9	11.8	14.6	20.1	**18.4**
March	40	42	44	46	**57**	1,167	1,261	1,351	1,628	**1,458**	14.9	13.5	13.4	17.3	**18.8**
April	40	41	46	50	**52**	1,069	1,186	1,240	1,220	**1,255**	16.8	11.8	12.0	15.8	**18.0**
May	47	41	39	49	**54**	1,029	1,263	1,160	1,259	**1,317**	15.8	14.5	12.8	14.6	**17.7**
June	40	41	40	45	**54**	1,046	1,145	1,204	1,410	**1,377**	15.9	14.1	11.3	13.0	**17.6**
July	39	41	38	44	**48**	1,103	1,204	1,252	1,327	**1,260**	15.9	16.0	13.0	14.0	**16.8**
August	34	39	41	42	**54**	1,096	1,161	1,167	1,255	**1,420**	17.0	16.4	13.7	15.7	**17.1**
September	36	39	45	47	**50**	1,016	1,057	1,211	1,233	**1,256**	17.4	18.3	16.0	15.9	**17.8**
October	40	41	43	47	**56**	1,214	975	1,281	1,322	**1,339**	16.3	20.3	16.2	15.9	**17.6**
November	37	38	44	51	**56**	1,093	1,067	1,146	1,309	**1,318**	15.4	19.4	17.7	16.1	**17.8**
December	39	43	44	48	**57**	1,284	1,283	1,468	1,272	**1,304**	14.9	17.3	19.3	17.7	**18.8**
Total or average	460	490	510	560	**650**	13,300	14,000	14,950	15,620	**15,750**	16.3	15.5	14.6	16.4	**17.9**

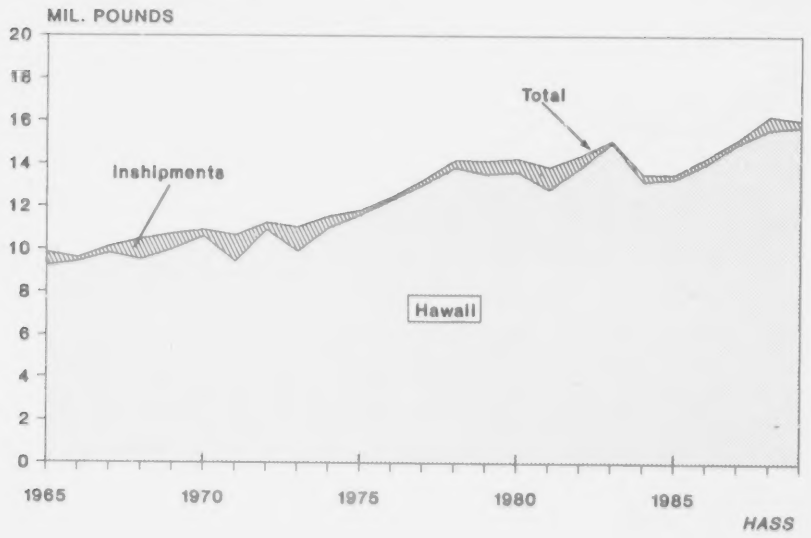
[1] Sum of monthly estimates may not add to State total due to rounding.

FRESH MARKET SUPPLY: CHINESE CABBAGE AND HEAD CABBAGE

MARKET SUPPLY:
Fresh Market Chinese Cabbage,
State of Hawaii, 1965-89



MARKET SUPPLY:
Fresh Market Head Cabbage,
State of Hawaii, 1965-89



CELERY

CELERY: Acreage, yield, production, price, and value, by islands, 1985-89

Year	Acreage harvested	Yield per acre	Production	Farm price	Value of sales
	Acres	1,000 pounds		Cents per pound	1,000 dollars
			STATE [1]		
1985	110	31.4	3,450	19.5	673
1986	100	26.8	2,680	21.5	576
1987	90	30.3	2,730	20.6	562
1988	85	25.9	2,200	22.9	504
1989	**80**	**25.0**	**2,000**	**26.5**	**530**
			HAWAII		
1985	90	30.0	2,700	18.7	505
1986	85	25.4	2,160	20.7	447
1987	70	28.9	2,020	20.1	406
1988	65	24.6	1,600	22.6	362
1989	**60**	**24.0**	**1,440**	**26.7**	**384**
			MAUI		
1985	20	37.5	750	22.4	168
1986	15	34.7	520	24.8	129
1987	20	35.5	710	22.0	156
1988	20	30.0	600	23.7	142
1989	**20**	**28.0**	**560**	**26.0**	**146**

[1] Sum of island estimates may not add to State total due to rounding.

CELERY: Acreage, production, and price, State of Hawaii, 1985-89

Month	Acreage harvested					Production					Farm price				
	1985	1986	1987	1988	1989	1985	1986	1987	1988	1989	1985	1986	1987	1988	1989
	Acres					1,000 pounds					Cents per pound				
January	8	11	9	8	7	228	252	183	197	184	24.4	21.1	22.7	24.4	22.7
February	8	7	6	7	6	242	247	181	191	168	21.7	20.2	23.1	24.5	24.5
March	9	8	8	7	5	272	265	254	215	207	18.7	20.6	22.7	23.1	24.7
April	11	9	11	7	7	344	240	329	208	196	17.4	20.5	19.0	21.0	23.3
May	10	8	8	8	6	363	213	302	173	157	17.4	23.1	17.9	22.7	31.0
June	10	6	8	8	7	326	240	287	196	170	19.4	22.7	19.7	21.9	32.0
July	9	10	6	7	8	355	244	220	207	152	19.2	20.9	20.8	20.9	30.2
August	12	9	7	6	6	310	212	206	176	142	18.8	21.2	20.1	22.3	29.2
September	8	8	7	8	5	255	182	227	154	148	20.3	21.2	18.4	25.2	27.3
October	8	8	7	6	7	257	184	193	134	137	18.4	21.5	18.7	24.5	25.3
November	8	7	6	6	8	238	175	165	148	148	20.3	22.3	22.9	23.0	24.9
December	9	9	7	7	8	260	226	183	201	191	20.4	23.3	24.1	22.5	25.1
Total or average	110	100	90	85	80	3,450	2,680	2,730	2,200	2,000	19.5	21.5	20.6	22.9	26.5

SWEET CORN: Acreage, yield, production, price, and value, by islands, 1985-89

Year	Acreage harvested	Yield per acre	Production	Farm price	Value of sales
	Acres	1,000 pounds		Cents per pound	1,000 dollars
			STATE [1]		
1985	255	4.2	1,060	36.6	388
1986	255	4.1	1,040	36.0	374
1987	345	4.3	1,480	34.2	506
1988	185	3.6	660	40.1	265
1989	**260**	**3.9**	**1,020**	**35.0**	**357**
			HAWAII/KAUAI [2]		
1985	35	5.1	180	31.2	56
1986	20	5.5	110	29.4	32
1987	55	5.7	315	33.4	105
1988	50	3.8	190	34.2	65
1989	**60**	**4.2**	**255**	**36.0**	**92**
			MAUI/MOLOKAI		
1985	20	4.0	80	42.3	34
1986	15	6.0	90	39.0	35
1987	15	5.7	85	40.5	34
1988	15	5.7	85	40.1	34
1989	**95**	**6.6**	**630**	**33.8**	**213**
			OAHU		
1985	200	4.0	800	37.2	298
1986	220	3.8	840	36.5	307
1987	275	3.9	1,080	34.0	367
1988	120	3.2	385	43.0	166
1989	**105**	**1.3**	**135**	**38.5**	**52**

[1] Sum of island estimates may not add to State total due to rounding.
[2] Kauai combined with Hawaii to avoid disclosure of individual operations.

SWEET CORN: Acreage, production, and price, State of Hawaii, 1985-89

Month	Acreage harvested					Production [1]					Farm price				
	1985	1986	1987	1988	1989	1985	1986	1987	1988	1989	1985	1986	1987	1988	1989
	Acres					1,000 pounds					Cents per pound				
January	16	11	18	4	**10**	60	43	31	21	**33**	37.0	37.3	33.7	33.0	**33.1**
February	15	14	17	3	**8**	53	66	54	16	**27**	37.0	36.3	37.3	34.1	**34.4**
March	14	18	26	5	**11**	47	113	126	22	**39**	38.0	39.0	41.5	36.9	**35.0**
April	16	22	33	13	**12**	78	75	140	69	**27**	39.4	38.1	40.7	42.9	**38.6**
May	22	24	35	17	**16**	120	100	135	64	**58**	38.9	39.6	38.1	40.6	**33.9**
June	27	24	37	15	**32**	127	98	198	70	**130**	37.8	34.8	30.8	42.2	**34.0**
July	29	35	34	16	**30**	132	131	215	76	**110**	36.4	31.2	30.9	43.1	**36.9**
August	27	22	40	22	**30**	129	83	176	81	**109**	36.4	32.5	31.8	44.6	**35.8**
September	23	26	34	26	**28**	77	99	130	79	**103**	33.6	38.0	34.6	38.2	**37.0**
October	22	21	25	26	**26**	71	88	122	70	**96**	34.6	36.6	33.3	38.6	**37.5**
November	29	23	33	25	**37**	119	85	112	52	**182**	34.9	34.3	29.3	35.8	**33.0**
December	15	15	13	13	**20**	47	59	41	40	**106**	32.9	35.7	32.9	35.2	**33.0**
Total or average	255	255	345	185	**260**	1,060	1,040	1,480	660	**1,020**	36.6	36.0	34.2	40.1	**35.0**

[1] Sum of monthly estimates may not add to annual total due to rounding.

CUCUMBERS

CUCUMBERS: Acreage, yield, production, price, and value, by islands, 1985-89

Year	Acreage harvested	Yield per acre	Production	Farm price	Value of sales
	Acres	1,000 pounds		Cents per pound	1,000 dollars
			STATE [1]		
1985	260	16.2	4,200	29.7	1,247
1986	220	16.9	3,720	31.8	1,183
1987	200	19.8	3,960	28.2	1,117
1988	220	18.0	3,950	33.0	1,304
1989	**220**	**15.9**	**3,500**	**39.4**	**1,379**
			HAWAII		
1985	95	23.2	2,200	27.2	598
1986	70	23.1	1,620	28.1	455
1987	85	24.9	2,120	24.4	517
1988	75	22.8	1,710	29.1	498
1989	**70**	**21.9**	**1,530**	**32.9**	**503**
			KAUAI		
1985	15	14.0	210	27.9	59
1986	25	11.2	280	33.4	94
1987	15	16.7	250	36.6	92
1988	15	9.0	135	44.0	59
1989	**10**	**12.0**	**120**	**42.7**	**51**
			MAUI/MOLOKAI		
1985	55	10.2	560	31.6	177
1986	50	12.0	600	33.2	199
1987	45	12.4	560	30.1	169
1988	45	15.3	690	34.2	236
1989	**60**	**12.8**	**770**	**38.5**	**296**
			OAHU		
1985	95	12.9	1,230	33.6	413
1986	75	16.3	1,220	35.6	434
1987	55	18.7	1,030	32.9	339
1988	85	16.6	1,415	36.1	511
1989	**80**	**13.5**	**1,080**	**49.0**	**529**

[1] Sum of island estimates may not add to State total due to rounding.

CUCUMBERS: Acreage, production, and price, State of Hawaii, 1985-89

Month	Acreage harvested [1]					Production [2]					Farm price				
	1985	1986	1987	1988	1989	1985	1986	1987	1988	1989	1985	1986	1987	1988	1989
	Acres					1,000 pounds					Cents per pound				
January	56	23	22	17	16	296	200	215	241	230	35.3	37.9	33.7	38.9	42.8
February	21	21	24	14	15	225	262	220	213	184	36.8	34.3	37.7	37.8	47.5
March	26	22	13	22	18	228	203	231	269	218	33.3	38.3	37.9	37.2	47.9
April	23	17	20	32	22	368	231	346	391	300	30.4	37.2	29.9	31.6	42.8
May	37	17	26	28	28	425	335	468	284	505	27.5	32.1	22.4	33.7	33.8
June	33	27	24	30	31	418	376	390	320	337	27.4	26.3	23.0	36.1	26.0
July	32	25	21	34	33	489	439	427	460	266	29.1	24.4	26.8	30.1	36.7
August	28	21	24	28	36	401	349	454	451	342	28.0	26.6	24.0	23.3	38.9
September	32	23	18	29	26	484	369	336	383	360	26.3	29.0	28.6	32.4	39.6
October	26	23	22	28	23	333	353	396	388	297	26.6	34.7	27.9	31.9	39.9
November	24	19	21	25	16	270	301	278	281	248	29.5	34.6	28.8	36.0	42.5
December	21	24	18	17	14	263	302	199	269	213	34.4	37.6	33.2	38.0	49.9
Total or average	260	220	200	220	220	4,200	3,720	3,960	3,950	3,500	29.7	31.8	28.2	33.0	39.4

[1] Sum of monthly data exceeds total because harvest period longer than 1 month.
[2] Sum of monthly estimates may not add to annual total due to rounding.

DAIKON: Acreage, yield, production, price, and value, by islands, 1985-89

Year	Acreage harvested	Yield per acre	Production	Farm price	Value of sales
	Acres	1,000 pounds		Cents per pound	1,000 dollars
			STATE [1]		
1985	260	13.8	3,600	17.8	641
1986	260	15.0	3,900	17.6	686
1987	250	14.8	3,700	17.1	633
1988	230	14.3	3,300	19.4	640
1989	**240**	**14.6**	**3,500**	**22.6**	**791**
			HAWAII		
1985	130	13.8	1,800	14.7	265
1986	130	14.6	1,900	14.4	274
1987	145	15.2	2,200	16.1	354
1988	135	14.4	1,950	16.4	320
1989	**150**	**14.0**	**2,100**	**19.2**	**403**
			MAUI/OAHU [2]		
1985	130	13.8	1,800	20.9	376
1986	130	15.4	2,000	20.6	412
1987	105	14.3	1,500	18.6	279
1988	95	14.2	1,350	23.7	320
1989	**90**	**15.6**	**1,400**	**27.7**	**388**

[1] Sum of island estimates may not add to State total due to rounding.
[2] Maui combined with Oahu to avoid disclosure of individual operations.

DAIKON: Acreage, production, and price, State of Hawaii, 1985-89

Month	Acreage harvested [1]					Processing and fresh market									
						Production					Farm price				
	1985	1986	1987	1988	1989	1985	1986	1987	1988	1989	1985	1986	1987	1988	1989
	Acres					1,000 pounds					Cents per pound				
January	18	25	21	18	**16**	280	361	305	206	**203**	19.7	17.9	16.6	24.1	**21.0**
February	17	22	21	20	**14**	229	324	310	279	**217**	21.8	16.0	16.9	21.7	**23.3**
March	21	27	18	22	**14**	273	284	313	357	**261**	20.6	16.3	16.8	19.6	**25.1**
April	20	25	23	21	**22**	351	364	331	334	**309**	16.8	17.6	15.8	16.8	**23.7**
May	21	23	20	19	**20**	312	340	300	304	**399**	14.3	17.3	15.8	17.2	**20.7**
June	24	20	21	21	**20**	278	291	336	299	**340**	17.1	16.5	16.1	18.9	**20.8**
July	23	18	22	17	**22**	323	299	317	282	**314**	18.0	19.2	17.1	17.0	**20.9**
August	25	21	20	21	**23**	324	339	315	246	**316**	17.9	18.4	17.4	18.0	**20.5**
September	24	19	19	18	**21**	336	403	297	237	**276**	16.5	17.5	16.1	20.2	**20.9**
October	22	20	19	18	**22**	321	318	263	243	**238**	16.1	16.0	16.9	21.1	**22.7**
November	20	20	21	19	**23**	235	217	272	262	**276**	17.1	17.1	19.0	19.2	**24.6**
December	25	20	25	16	**23**	338	360	341	251	**351**	19.0	20.7	20.6	21.0	**27.2**
Total or average	260	260	250	230	**240**	3,600	3,900	3,700	3,300	**3,500**	17.8	17.6	17.1	19.4	**22.6**

[1] Sum of monthly estimates may not add to State total due to rounding.

EGGPLANT

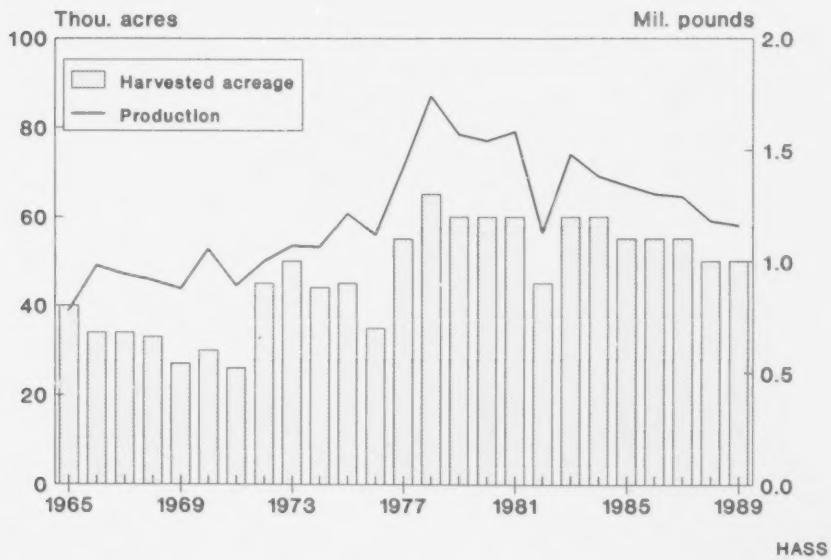
EGGPLANT: Acreage, yield, production, price, and value, by islands, 1985-89

Year	Acreage harvested	Yield per acre	Production	Farm price	Value of sales
	Acres	1,000 pounds		Cents per pound	1,000 dollars
			STATE [1]		
1985	55	24.4	1,340	51.0	683
1986	55	23.6	1,300	49.7	646
1987	55	23.5	1,290	53.4	689
1988	50	23.6	1,180	55.8	658
1989	**50**	**23.2**	**1,160**	**70.8**	**821**
			HAWAII/MAUI/MOLOKAI [2]		
1985	10	21.0	210	41.7	88
1986	6	20.0	120	43.2	52
1987	15	22.7	340	50.9	173
1988	20	22.5	450	52.0	234
1989	**25**	**22.8**	**570**	**52.4**	**299**
			KAUAI		
1985	10	28.0	280	48.5	136
1986	7	25.7	180	50.0	90
1987	2	12.5	25	52.5	13
1988 [2]					
1989 [2]					
			OAHU		
1985	35	24.3	850	54.0	459
1986	42	23.8	1,000	50.4	504
1987	38	24.3	925	54.4	503
1988	30	24.3	730	58.1	424
1989	**25**	**23.6**	**590**	**88.5**	**522**

[1] Sum of island estimates may not add to State total due to rounding.

[2] Maui and Molokai combined with Hawaii (1984-87) to avoid disclosure of individual operations. Kauai combined with Hawaii, Maui, and Molokai beginning 1988.

EGGPLANT: Acreage and Production, State of Hawaii, 1965-1989



LETTUCES (HEAD, SEMI-HEAD): Acreage, yield, production, price, and value, by islands, 1985-89

Year	Acreage harvested	Yield per acre	Production	Farm price	Value of sales
	Acres	1,000 pounds		Cents per pound	1,000 dollars
			STATE [1]		
1985	650	14.5	9,400	24.9	2,341
1986	620	14.0	8,700	27.2	2,366
1987	520	13.5	7,000	27.4	1,918
1988	360	12.5	4,500	36.4	1,638
1989	**260**	**12.5**	**3,300**	**39.0**	**1,287**
			HAWAII		
1985	340	10.6	3,590	21.6	775
1986	280	8.9	2,500	24.5	613
1987	245	8.2	2,000	27.1	542
1988	195	8.2	1,600	35.9	574
1989	**155**	**7.8**	**1,210**	**36.8**	**445**
			KAUAI/OAHU [2]		
1985	120	13.3	1,590	36.4	579
1986	120	12.5	1,500	36.3	545
1987	95	13.9	1,320	35.9	474
1988	70	17.9	1,255	43.6	547
1989	**40**	**21.8**	**870**	**51.9**	**452**
			MAUI/MOLOKAI		
1985	190	22.2	4,220	23.4	987
1986	220	21.4	4,700	25.7	1,208
1987	180	20.4	3,680	24.5	902
1988	95	17.3	1,645	31.4	517
1989	**65**	**18.8**	**1,220**	**32.0**	**390**

[1] Sum of island estimates may not add to State total due to rounding.
[2] Kauai combined with Oahu to avoid disclosure of individual operations.

LETTUCES (HEAD, SEMI-HEAD): Acreage, production, and price, State of Hawaii, 1985-89

Month	Acreage harvested [1]					Production [1]					Farm price				
	1985	1986	1987	1988	1989	1985	1986	1987	1988	1989	1985	1986	1987	1988	1989
	Acres					1,000 pounds					Cents per pound				
January	50	59	48	33	**24**	686	906	674	265	**240**	30.0	28.8	28.6	55.3	**38.1**
February	56	53	49	32	**19**	705	844	711	501	**203**	27.8	23.4	29.5	40.1	**40.3**
March	56	58	52	42	**24**	954	950	879	550	**306**	25.2	23.0	26.5	32.1	**43.8**
April	56	51	48	36	**22**	998	770	829	502	**328**	21.7	23.9	22.1	30.8	**39.7**
May	61	49	49	33	**23**	951	808	726	448	**354**	21.0	27.1	23.4	30.8	**35.8**
June	54	51	47	33	**26**	907	753	699	438	**316**	22.8	27.9	23.7	32.0	**36.2**
July	61	51	48	25	**21**	849	703	582	418	**323**	22.0	28.0	25.1	33.0	**36.9**
August	52	52	42	28	**20**	627	638	488	314	**219**	24.1	26.5	28.7	35.5	**39.7**
September	50	52	39	25	**20**	609	534	429	297	**247**	27.1	31.2	30.4	37.0	**40.9**
October	48	50	30	27	**22**	676	565	377	282	**241**	27.2	30.1	28.1	42.2	**38.1**
November	54	50	35	22	**20**	635	635	301	231	**258**	27.1	28.9	35.4	42.1	**38.9**
December	52	44	33	24	**19**	803	594	305	254	**265**	27.3	29.7	43.3	41.8	**41.6**
Total or average	650	620	520	360	**260**	9,400	8,700	7,000	4,500	**3,300**	24.9	27.2	27.4	36.4	**39.0**

[1] Sum of monthly estimates may not add to State total due to rounding.

DRY ONIONS

DRY ONIONS: Acreage, yield, production, price, and value, by islands, 1985-89

Year	Acreage harvested	Yield per acre	Production	Farm price	Value of sales
	Acres	1,000 pounds		Cents per pound	1,000 dollars
			STATE [1]		
1985	165	11.5	1,890	71.6	1,353
1986	140	10.6	1,480	73.9	1,094
1987	170	11.6	1,980	72.6	1,437
1988	150	9.5	1,420	78.3	1,112
1989	**150**	**8.3**	**1,250**	**96.5**	**1,206**
			HAWAII/KAUAI/OAHU [2]		
1985	5	8.0	40	66.3	27
1986	10	10.0	100	67.0	67
1987	10	13.0	130	69.6	90
1988	5	12.0	60	71.4	43
1989	**10**	**12.0**	**120**	**80.4**	**96**
			MAUI/MOLOKAI		
1985	160	11.6	1,850	71.7	1,326
1986	130	10.6	1,380	74.4	1,027
1987	160	11.6	1,850	72.8	1,347
1988	145	9.4	1,360	78.6	1,069
1989	**140**	**8.1**	**1,130**	**98.2**	**1,110**

[1] Sum of island estimates may not add to State total due to rounding.
[2] Kauai and Oahu combined with Hawaii to avoid disclosure of individual operations.

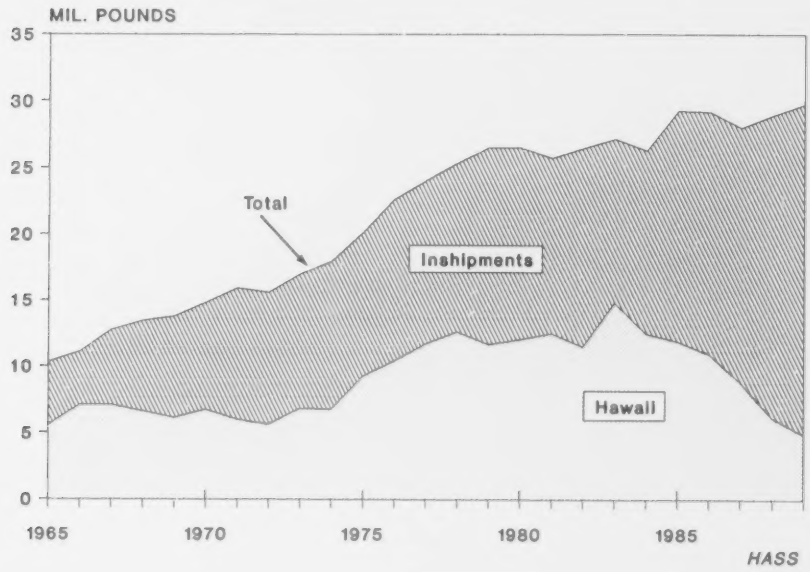
DRY ONIONS: Acreage, production, and price, State of Hawaii, 1985-89

Month	Acreage harvested [1]					Production					Farm price				
	1985	1986	1987	1988	1989	1985	1986	1987	1988	1989	1985	1986	1987	1988	1989
	Acres					1,000 pounds					Cents per pound				
January	12	7	14	16	12	163	115	176	67	**66**	75.6	70.7	74.1	75.7	**84.4**
February	18	23	18	16	20	150	202	157	81	**86**	85.5	62.0	66.9	80.1	**90.7**
March	11	11	19	9	5	81	163	169	123	**70**	75.6	53.7	51.6	81.2	**85.7**
April	17	14	17	15	5	221	180	217	183	**80**	79.3	71.1	59.1	90.3	**98.7**
May	23	5	18	13	10	231	122	202	193	**81**	75.9	78.1	71.8	73.0	**93.4**
June	20	7	12	15	23	209	120	191	180	**156**	62.8	85.1	78.1	71.1	**98.1**
July	19	11	23	9	17	197	132	246	110	**192**	63.8	83.7	71.4	68.3	**94.2**
August	10	11	12	11	13	133	110	177	137	**143**	66.1	80.0	80.0	76.1	**95.4**
September	10	12	10	10	9	132	106	152	106	**115**	66.6	85.4	84.5	80.4	**98.3**
October	12	8	4	11	26	142	85	70	69	**113**	66.0	83.8	77.8	79.0	**100.9**
November	7	14	10	11	4	129	58	143	80	**75**	66.6	80.5	87.1	77.8	**107.3**
December	6	17	13	14	6	102	87	80	91	**73**	75.8	77.7	83.5	88.3	**109.7**
Total or average	165	140	170	150	150	1,890	1,480	1,980	1,420	**1,250**	71.6	73.9	72.6	78.3	**96.5**

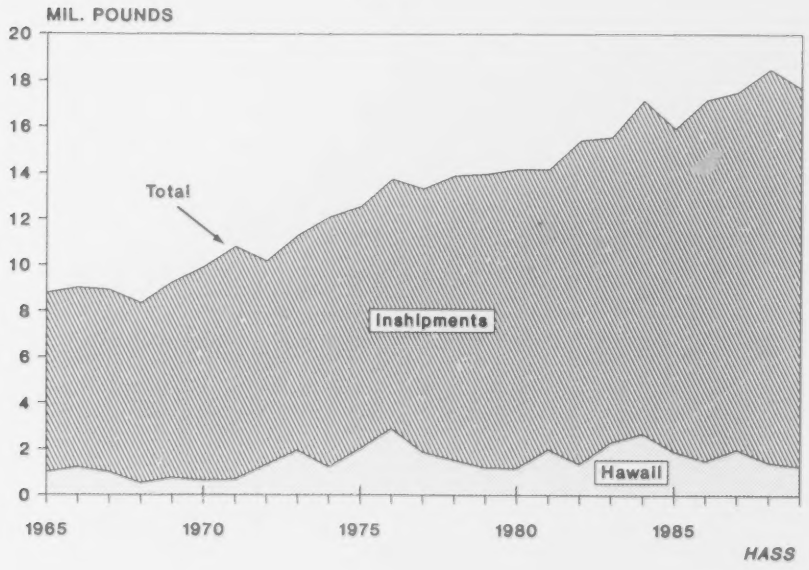
[1] Sum of monthly estimates may not add to State total due to rounding.

FRESH MARKET SUPPLY: LETTUCES AND DRY ONIONS

MARKET SUPPLY: Fresh Market Lettuces,
State of Hawaii, 1965-89



MARKET SUPPLY: Fresh Market Dry Onions,
State of Hawaii, 1965-89



GREEN ONIONS

GREEN ONIONS: Acreage, yield, production, price, and value, by islands, 1985-89

Year	Acreage harvested	Yield per acre	Production	Farm price	Value of sales
	Acres	1,000 pounds		Cents per pound	1,000 dollars
			STATE [1]		
1985	200	7.1	1,410	75.7	1,067
1986	190	7.6	1,440	81.3	1,171
1987	170	7.2	1,220	73.1	892
1988	170	7.3	1,240	86.1	1,068
1989	**190**	**7.4**	**1,400**	**97.8**	**1,369**
			HAWAII/KAUAI [2]		
1985	15	5.7	85	71.9	61
1986	15	6.0	90	83.9	76
1987	15	6.7	100	73.3	73
1988	20	6.0	120	81.6	98
1989	**15**	**4.0**	**60**	**93.0**	**56**
			MAUI/MOLOKAI		
1985	15	9.7	145	79.4	115
1986	10	11.0	110	81.3	89
1987	15	8.0	120	80.7	97
1988	20	8.5	170	80.2	136
1989	**30**	**7.5**	**225**	**87.9**	**198**
			OAHU		
1985	170	6.9	1,180	75.5	891
1986	165	7.5	1,240	81.1	1,006
1987	140	7.1	1,000	72.2	722
1988	130	7.3	950	87.8	834
1989	**145**	**7.7**	**1,115**	**100.0**	**1,115**

[1] Sum of island estimates may not add to State total due to rounding.
[2] Kauai combined with Hawaii to avoid disclosure of individual operations.

GREEN ONIONS: Acreage, production, and price, State of Hawaii, 1985-89

Month	Acreage harvested					Production					Farm price				
	1985	1986	1987	1988	1989	1985	1986	1987	1988	1989	1985	1986	1987	1988	1989
	Acres					1,000 pounds					Cents per pound				
January	17	17	20	13	18	98	117	126	58	112	84.4	83.0	75.6	113.0	94.1
February	16	16	16	8	15	104	104	116	81	98	89.3	80.8	70.5	107.1	93.1
March	15	15	15	10	14	92	124	116	100	115	87.9	81.0	63.8	94.6	97.8
April	15	15	16	12	15	102	117	114	103	113	77.0	83.4	64.6	88.9	98.9
May	17	12	12	16	14	120	134	107	102	124	65.7	79.4	61.3	72.9	96.0
June	18	14	13	14	16	128	118	115	99	125	64.3	77.1	59.7	68.0	92.3
July	17	13	15	14	16	120	117	103	99	114	63.8	75.8	61.8	68.6	95.3
August	18	17	14	16	19	135	113	91	100	127	66.8	77.7	76.8	77.1	96.8
September	17	16	11	16	18	126	115	83	117	136	70.9	83.2	87.4	89.0	92.2
October	19	17	13	17	14	127	110	87	130	105	77.8	82.9	87.1	95.1	101.2
November	16	18	13	16	14	124	123	103	124	110	81.7	85.4	92.2	90.1	106.8
December	15	20	12	18	17	134	148	59	127	121	85.8	85.1	95.0	90.8	109.9
Total or average	200	190	170	170	190	1,410	1,440	1,220	1,240	1,400	75.7	81.3	73.1	86.1	97.8

GREEN PEPPERS: Acreage, yield, production, price, and value, by islands, 1985-89

Year	Acreage harvested	Yield per acre	Production	Farm price	Value of sales
	Acres	1,000 pounds		Cents per pound	1,000 dollars
			STATE [1]		
1985	120	12.3	1,480	55.0	814
1986	190	10.8	2,050	43.6	894
1987	200	11.5	2,300	45.2	1,040
1988	170	8.4	1,430	48.5	694
1989	**155**	**8.8**	**1,370**	**55.9**	**766**
			HAWAII		
1985	13	9.2	120	54.3	65
1986	15	6.0	90	55.0	50
1987	15	7.3	110	51.3	56
1988	10	9.5	95	63.6	60
1989	**15**	**9.3**	**140**	**56.1**	**79**
			KAUAI		
1985	20	18.5	370	47.8	177
1986	30	13.7	410	40.2	165
1987 [2]	12	15.0	180	52.2	94
1988 [2]	10	8.5	85	54.0	46
1989 [2]	**3**	**10.0**	**30**	**66.5**	**20**
			MAUI/MOLOKAI		
1985	80	11.0	880	57.8	509
1986	130	10.2	1,330	43.2	575
1987	173	11.6	2,010	44.2	890
1988	150	8.3	1,250	47.0	588
1989	**137**	**8.8**	**1,200**	**55.6**	**667**
			OAHU		
1985	7	15.7	110	56.9	63
1986	15	14.7	220	47.4	104
1987 [2]					
1988 [2]					
1989 [2]					

[1] Sum of island estimates may not add to State total due to rounding.
[2] Oahu combined with Kauai to avoid disclosure of individual operations.

GREEN PEPPERS: Acreage, production, and price, State of Hawaii, 1985-89

Month	Acreage harvested [1]					Production					Farm price				
	1985	1986	1987	1988	1989	1985	1986	1987	1988	1989	1985	1986	1987	1988	1989
	Acres					1,000 pounds					Cents per pound				
January	33	34	48	18	21	114	148	197	48	81	52.7	43.4	41.6	45.3	51.3
February	31	29	50	14	12	103	206	187	92	139	63.7	36.2	38.8	43.6	52.7
March	35	29	34	26	18	113	177	196	211	104	66.3	41.2	42.3	41.3	55.9
April	26	30	25	37	18	169	161	234	196	80	65.6	53.0	39.1	55.8	63.4
May	17	26	32	25	19	98	160	214	197	134	60.2	54.9	43.8	55.0	67.5
June	15	26	31	28	13	114	136	235	133	91	59.1	49.5	70.2	56.3	57.6
July	22	23	24	13	6	143	139	120	47	47	49.2	47.8	50.1	57.5	54.4
August	21	21	17	17	7	109	125	104	55	35	48.9	40.3	45.9	52.3	54.2
September	17	24	22	12	6	77	136	103	44	34	48.0	40.8	51.6	57.4	47.8
October	18	26	32	22	24	111	226	221	172	174	45.1	40.8	43.6	37.8	52.6
November	20	32	40	16	33	151	210	272	123	230	49.6	40.4	38.2	38.4	58.5
December	25	40	25	31	30	178	226	217	112	221	50.7	40.4	41.6	52.8	50.6
Total or average	120	190	200	170	155	1,480	2,050	2,300	1,430	1,370	55.0	43.6	45.2	48.5	55.9

[1] Sum of monthly data exceeds total because harvest period longer than 1 month.

ROMAINE

ROMAINE: Acreage, yield, production, price, and value, by islands, 1985-89

Year	Acreage harvested	Yield per acre	Production	Farm price	Value of sales
	Acres	1,000 pounds		Cents per pound	1,000 dollars
			STATE		
1985	150	16.8	2,520	22.8	575
1986	160	14.4	2,300	25.2	580
1987	160	11.6	1,860	25.2	469
1988	150	11.2	1,680	33.1	556
1989	**140**	**11.4**	**1,600**	**37.6**	**602**
			HAWAII		
1985	95	15.3	1,450	21.6	313
1986	90	11.7	1,050	26.2	275
1987	90	7.8	700	28.7	201
1988	75	8.5	640	35.1	225
1989	**70**	**9.5**	**665**	**39.2**	**261**
			MAUI		
1985	55	19.5	1,070	24.5	262
1986	70	17.9	1,250	24.4	305
1987	70	16.6	1,160	23.1	268
1988	75	13.9	1,040	31.8	331
1989	**70**	**13.4**	**935**	**36.5**	**341**

ROMAINE: Acreage, production, and price, State of Hawaii, 1985-89

Month	Acreage harvested [1]					Production [1]					Farm price				
	1985	1986	1987	1988	1989	1985	1986	1987	1988	1989	1985	1986	1987	1988	1989
	Acres					1,000 pounds					Cents per pound				
January	10	11	18	10	11	162	173	143	100	120	29.4	26.6	26.0	51.4	38.0
February	14	10	13	12	9	165	180	169	156	118	29.2	25.0	27.6	42.6	40.7
March	12	12	16	13	11	239	254	220	189	126	26.0	23.0	22.3	29.0	44.0
April	13	10	13	15	10	229	163	204	166	154	20.7	23.5	21.6	24.6	40.9
May	13	12	15	15	12	253	193	191	174	128	19.9	25.4	20.1	27.5	34.1
June	13	12	13	15	13	254	224	190	171	133	18.0	23.5	20.0	27.6	34.0
July	14	16	14	12	11	248	244	151	153	127	18.5	23.1	21.7	28.2	32.7
August	12	13	12	12	11	199	171	128	127	126	21.5	25.5	26.7	31.5	34.5
September	13	13	12	12	12	192	160	122	98	146	24.6	28.0	28.0	33.8	36.6
October	13	13	7	12	11	200	190	120	138	119	22.7	28.7	27.5	36.9	37.4
November	11	18	13	11	14	177	191	125	102	143	23.9	25.4	33.5	38.0	40.0
December	12	20	9	11	15	202	157	97	106	160	24.6	26.8	41.0	38.6	37.7
Total or average	150	160	160	150	140	2,520	2,300	1,860	1,680	1,600	22.8	25.2	25.2	33.1	37.6

[1] Sum of monthly estimates may not add to State total due to rounding.

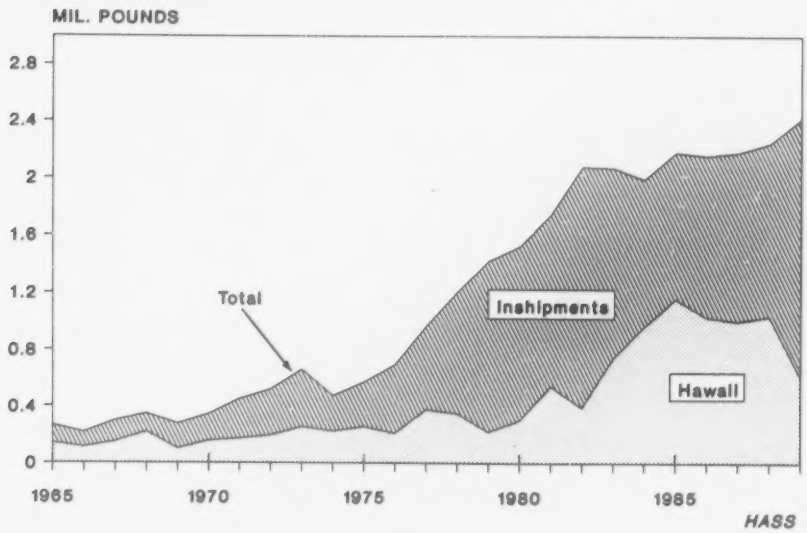
ITALIAN SQUASH: Acreage, yield, production, price, and value, by islands, 1985-89

Year	Acreage harvested	Yield per acre	Production	Farm price	Value of sales
	Acres	1,000 pounds		Cents per pound	1,000 dollars
			STATE [1]		
1985	110	10.5	1,160	31.7	368
1986	100	10.3	1,030	32.3	333
1987	90	11.1	1,000	36.4	364
1988	100	10.4	1,040	36.7	381
1989	**70**	**8.7**	**610**	**38.7**	**236**
			HAWAII		
1985	40	9.5	380	29.5	112
1986	45	8.2	370	31.0	115
1987	45	7.2	325	34.2	111
1988	43	7.7	330	38.0	125
1989 [2]	**22**	**5.5**	**120**	**45.5**	**55**
			KAUAI/OAHU [2]		
1985	4	10.0	40	35.0	14
1986	2	10.0	20	35.5	7
1987	5	13.0	65	39.0	25
1988	1	15.0	15	38.3	6
1989 [2]					
			MAUI		
1985	66	11.2	740	32.7	242
1986	53	12.1	640	33.0	211
1987	40	15.3	610	37.3	228
1988	56	12.4	695	36.0	250
1989	**48**	**10.2**	**490**	**37.0**	**181**

[1] Sum of island estimates may not add to State total due to rounding.

[2] Oahu combined with Kauai (1985-88) to avoid disclosure of individual operations. Beginning 1989 Oahu and Kauai combined with Hawaii.

MARKET SUPPLY:
Fresh Market Italian Squash,
State of Hawaii, 1965-89



SWEETPOTATOES

SWEETPOTATOES: Acreage, yield, production, price, and value, by islands, 1985-89

Year	Acreage harvested	Yield per acre	Production	Farm price	Value of sales
	Acres	1,000 pounds		Cents per pound	1,000 dollars
			STATE [1]		
1985	200	9.6	1,910	28.6	546
1986	210	10.0	2,100	27.1	569
1987	180	8.9	1,600	28.6	458
1988	140	11.0	1,540	34.4	530
1989	**110**	**11.4**	**1,250**	**41.0**	**513**
			HAWAII/KAUAI [2]		
1985	15	8.7	130	29.6	38
1986	15	10.0	150	29.8	45
1987	15	9.3	140	33.1	46
1988	20	10.0	200	33.0	66
1989	**15**	**10.0**	**150**	**39.4**	**59**
			MAUI/MOLOKAI		
1985	155	9.5	1,480	27.1	401
1986	165	9.6	1,590	24.6	391
1987	155	8.7	1,350	27.4	370
1988	110	11.3	1,240	33.7	418
1989	**85**	**12.0**	**1,020**	**39.9**	**407**
			OAHU		
1985	30	10.0	300	35.7	107
1986	30	12.0	360	37.0	133
1987	10	11.0	110	37.8	42
1988	10	10.0	100	46.3	46
1989	**10**	**8.0**	**80**	**58.5**	**47**

[1] Sum of island estimates may not add to State total due to rounding.
[2] Kauai combined with Hawaii to avoid disclosure of individual operations.

SWEETPOTATOES: Acreage, production, and price, State of Hawaii, 1985-89

Month	Acreage harvested					Production					Farm price				
	1985	1986	1987	1988	1989	1985	1986	1987	1988	1989	1985	1986	1987	1988	1989
	Acres					1,000 pounds					Cents per pound				
January	9	18	19	12	11	133	198	141	101	127	29.7	28.0	24.4	31.8	38.1
February	16	16	19	13	8	131	155	114	122	100	29.8	26.2	27.1	32.8	39.1
March	13	13	18	12	8	81	134	79	121	110	31.5	26.2	29.0	33.5	40.4
April	21	14	19	12	8	145	188	105	120	97	30.2	25.5	29.3	34.8	41.2
May	20	20	19	10	8	170	198	82	88	104	30.8	27.6	31.1	35.2	41.8
June	17	19	15	13	8	206	197	125	179	113	29.3	28.3	31.1	35.4	41.3
July	16	18	12	13	10	269	183	172	159	104	26.4	25.9	31.6	34.8	42.5
August	16	15		11	12	200	102	181	155	116	24.2	28.1	30.4	34.3	41.7
September	15	19	13	14	8	133	157	209	173	108	25.3	27.3	27.7	33.8	41.5
October	18	1	11	11	10	113	179	145	125	91	28.0	27.9	26.1	34.4	42.2
November	19	19	10	9	11	137	186	112	83	88	30.1	27.0	25.9	36.2	41.9
December	20	21	11	10	8	192	223	135	114	92	31.4	26.9	30.0	36.6	41.7
Total or average	200	210	180	140	110	1,910	2,100	1,600	1,540	1,250	28.6	27.1	28.6	34.4	41.0

TARO: Number of farms, acreage, marketings, price, and value, by islands, 1985-89

Year	Farms	Acreage in crop [1]			Marketings			Farm price			Value of sales
		Poi taro	Chinese taro	Total	Fresh	Processed	Total	Poi taro	Chinese taro	All	
	Number	Acres			1,000 pounds			Cents per pound			1,000 dollars
					STATE						
1985	155	340	60	400	590	6,270	6,860	21.6	37.9	23.0	1,578
1986	140	330	60	390	490	5,840	6,330	22.2	33.9	23.1	1,462
1987	140	330	70	400	570	5,730	6,300	24.2	41.7	26.6	1,676
1988	155	310	110	420	600	6,200	6,800	25.8	39.4	28.0	1,904
1989	**150**	**290**	**140**	**430**	**500**	**6,000**	**6,500**	**28.5**	**40.1**	**30.7**	**1,996**
					HAWAII						
1985	72	35	50	85	390	620	1,010	23.4	37.2	28.7	290
1986	65	35	50	85	400	440	840	22.6	34.2	28.1	236
1987	68	45	65	110	510	770	1,280	23.8	42.0	35.3	452
1988	92	40	100	140	580	950	1,530	25.3	39.3	34.9	534
1989	**87**	**35**	**130**	**165**	**480**	**1,140**	**1,620**	**27.0**	**40.1**	**36.5**	**591**
					KAUAI						
1985	48	210	[2]	210	60	4,720	4,780	21.4	[3]	21.6	1,032
1986	50	215	[2]	215	40	4,450	4,490	22.4	[3]	22.5	1,010
1987	46	200	[2]	200	30	4,140	4,170	24.3	[3]	24.4	1,017
1988	42	190	[2]	190	0	4,410	4,410	26.1	[3]	26.2	1,155
1989	**45**	**180**	[2]	**180**	**0**	**4,160**	**4,160**	**29.0**	[3]	**29.1**	**1,211**
					MAUI/MOLOKAI/OAHU [4]						
1985	35	95	10	105	140	930	1,070	21.4	40.5	23.9	256
1986	25	80	10	90	50	950	1,000	21.0	32.3	21.6	216
1987	26	85	5	90	30	820	850	23.8	40.8	24.4	207
1988	21	80	10	90	20	840	860	24.6	40.0	25.0	215
1989	**15**	**75**	**10**	**85**	**20**	**700**	**720**	**26.5**	**40.0**	**26.9**	**194**

[1] Survey conducted in November each year. Does not include acreage used primarily for leaf production.
[2] Kauai combined with Maui, Molokai, and Oahu to avoid disclosure of individual operations.
[3] Not shown separately but accounted for in State average.
[4] Oahu combined with Maui and Molokai to avoid disclosure of individual operations.

TARO: Hawaii imports, 1985-89

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.	Total
	1,000 pounds												
1985	92	65	108	107	147	133	74	78	66	41	49	53	1,013
1986	34	43	49	53	80	44	62	60	54	55	77	56	667
1987	91	86	70	109	98	43	70	45	45	48	39	61	805
1988	39	78	91	72	62	46	25	30	35	29	66	42	615
1989	**46**	**68**	**75**	**122**	**78**	**83**	**58**	**42**	**51**	**27**	**46**	**33**	**729**

Source of inshipment data: Market News Service, Hawaii Department of Agriculture.

TOMATOES

TOMATOES: Acreage, yield, production, price, and value, by islands, 1985-89

Year	Acreage harvested	Yield per acre	Production	Farm price	Value of sales
	Acres	1,000 pounds		Cents per pound	1,000 dollars
			STATE [1]		
1985	300	26.0	7,800	40.2	3,136
1986	240	28.0	6,700	41.0	2,747
1987	250	28.0	7,000	42.6	2,982
1988	250	28.0	7,000	48.5	3,395
1989	**250**	**22.0**	**5,500**	**55.4**	**3,047**
			HAWAII		
1985	140	33.2	4,650	41.8	1,944
1986	110	33.2	3,650	42.5	1,551
1987	90	32.7	2,940	46.4	1,364
1988	90	36.2	3,260	51.8	1,689
1989	**85**	**35.3**	**3,000**	**60.6**	**1,818**
			KAUAI		
1985	10	15.0	150	37.4	56
1986	15	16.7	250	37.6	94
1987	8	14.4	115	50.9	59
1988	13	13.5	175	42.3	74
1989	**10**	**7.0**	**70**	**51.4**	**36**
			MAUI/MOLOKAI		
1985	135	18.9	2,550	36.1	921
1986	105	23.3	2,450	37.7	924
1987	135	24.4	3,300	37.3	1,231
1988	135	22.8	3,080	44.4	1,368
1989	**150**	**15.6**	**2,340**	**48.5**	**1,135**
			OAHU		
1985	15	30.0	450	47.8	215
1986	10	35.0	350	50.9	178
1987	17	37.9	645	50.8	328
1988	12	40.4	485	54.5	264
1989	**5**	**18.0**	**90**	**64.3**	**58**

[1] Sum of island estimates may not add to State total due to rounding.

TOMATOES: Acreage, production, and price, State of Hawaii, 1985-89

Month	Acreage harvested [1]					Production [2]					Farm price				
	1985	1986	1987	1988	1989	1985	1986	1987	1988	1989	1985	1986	1987	1988	1989
	Acres					1,000 pounds					Cents per pound				
January	46	58	53	40	**44**	750	718	636	568	**526**	37.7	47.6	42.3	50.3	**50.9**
February	42	50	52	30	**41**	808	671	651	520	**596**	40.8	39.1	44.3	48.3	**55.3**
March	49	52	50	42	**55**	748	866	708	746	**639**	42.8	37.3	43.5	38.9	**53.1**
April	52	43	45	42	**53**	747	747	710	755	**563**	47.2	39.1	40.4	46.9	**55.7**
May	52	43	38	48	**45**	640	597	774	655	**577**	42.0	41.7	40.9	49.9	**60.9**
June	44	39	38	48	**41**	608	480	643	604	**449**	39.5	41.1	42.0	46.5	**53.7**
July	38	31	32	33	**27**	686	397	472	460	**350**	37.5	39.4	40.2	51.7	**60.7**
August	38	24	28	33	**37**	567	356	423	510	**359**	35.6	39.4	38.4	52.9	**57.9**
September	40	29	26	36	**24**	493	342	397	465	**360**	34.1	38.0	41.9	49.0	**55.3**
October	48	39	30	34	**24**	686	415	413	478	**349**	34.9	39.0	39.6	50.1	**56.8**
November	42	46	32	35	**29**	414	439	457	611	**367**	40.4	47.0	44.8	50.3	**52.4**
December	48	51	32	46	**31**	653	672	716	628	**365**	47.2	42.8	49.5	51.6	**52.7**
Total or average	300	240	250	250	**250**	7,800	6,700	7,000	7,000	**5,500**	40.2	41.0	42.6	48.5	**55.4**

[1] Sum of monthly data exceeds total because harvest period longer than 1 mont
[2] Sum of monthly estimates may not add to annual total due to rounding.

WATERMELONS: Acreage, yield, production, price, and value, by islands, 1985-89

Year	Acreage harvested	Yield per acre	Production	Farm price	Value of sales
	Acres	1,000 pounds		Cents per pound	1,000 dollars
			STATE [1]		
1985	480	18.3	8,800	17.0	1,496
1986	620	23.1	14,300	12.6	1,802
1987	740	18.6	13,800	11.9	1,642
1988	790	23.9	18,900	11.7	2,211
1989	**670**	**20.1**	**13,500**	**13.2**	**1,782**
			HAWAII		
1985	5	8.0	40	22.8	9
1986	10	8.5	85	16.3	14
1987	10	6.0	60	16.0	10
1988	15	7.7	115	15.1	17
1989	**3**	**5.0**	**15**	**14.5**	**2**
			KAUAI		
1985	45	10.2	460	20.3	93
1986	30	10.7	320	16.0	51
1987	25	8.0	200	19.7	39
1988	25	14.6	365	15.4	56
1989	**16**	**8.4**	**135**	**22.9**	**31**
			MAUI/MOLOKAI		
1985	345	20.7	7,150	16.4	1,173
1986	460	25.9	11,915	12.0	1,430
1987	575	19.9	11,470	11.2	1,285
1988	675	26.2	17,665	11.4	2,014
1989	**615**	**21.0**	**12,930**	**13.1**	**1,694**
			OAHU		
1985	85	13.5	1,150	19.2	221
1986	120	16.5	1,980	15.5	307
1987	130	15.9	2,070	14.9	308
1988	75	10.1	755	16.4	124
1989	**36**	**11.7**	**420**	**13.0**	**55**

[1] Sum of island estimates may not add to State total due to rounding.

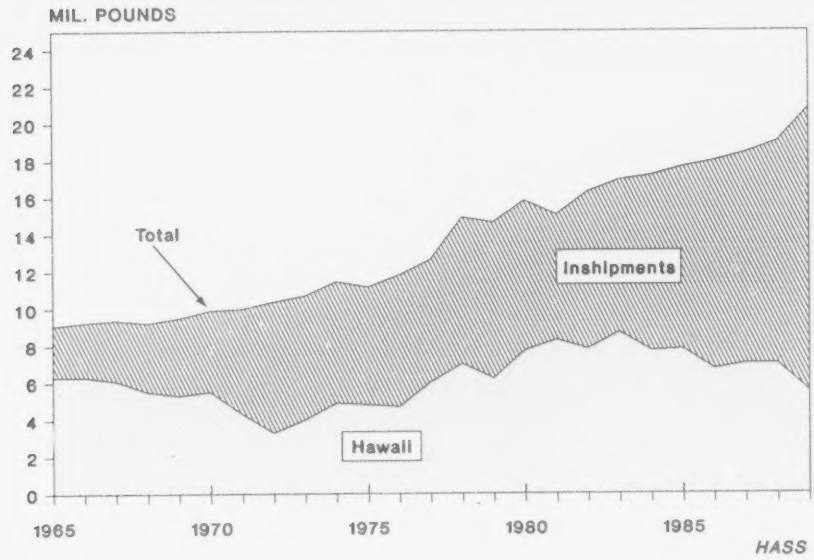
WATERMELONS: Acreage, production, and price, State of Hawaii, 1985-89

Month	Acreage harvested [1]					Production					Farm price				
	1985	1986	1987	1988	1989	1985	1986	1987	1988	1989	1985	1986	1987	1988	1989
	Acres					1,000 pounds					Cents per pound				
January	6	5	5	1	0	14	4	9	3	0	23.1	22.0	22.0	30.0	0
February	4	6	1	1	0	12	3	2	3	0	31.3	25.6	11.1	25.0	0
March	3	12	4	4	10	18	171	11	55	23	30.0	26.3	29.6	29.9	22.0
April	28	66	61	77	35	250	768	727	1,524	247	29.1	16.1	25.1	21.1	20.0
May	61	102	111	110	75	1,662	2,314	1,979	3,093	1,362	20.8	14.0	12.5	10.9	19.1
June	73	103	181	187	126	1,990	2,582	2,482	3,827	4,937	15.1	13.2	12.0	10.3	13.2
July	81	136	158	159	198	1,718	2,962	2,315	4,244	1,639	14.9	11.0	10.3	10.2	11.4
August	116	112	107	168	228	1,649	3,029	2,665	3,110	3,196	13.9	10.6	9.5	11.1	11.6
September	98	96	95	144	144	608	1,928	2,244	1,812	1,577	19.5	11.6	10.4	11.8	11.5
October	61	66	76	79	33	648	435	1,010	1,050	494	18.0	17.7	13.5	12.2	13.6
November	41	12	43	10	2	287	71	326	179	10	18.5	20.4	15.0	13.4	32.5
December	15	17	5	0	1	44	33	30	0	15	19.5	17.0	15.5	0	35.0
Total or average	480	620	740	790	670	8,800	14,300	13,800	18,900	13,500	17.0	12.6	11.9	11.7	13.2

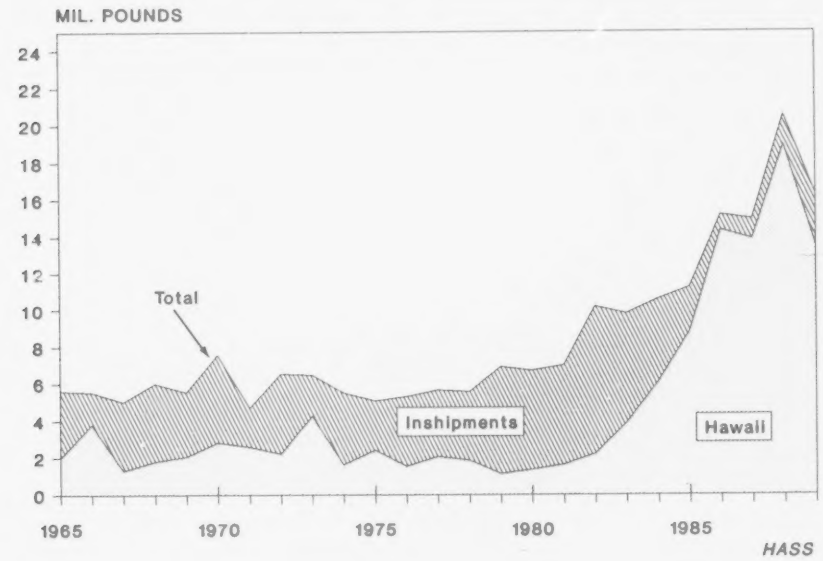
[1] Sum of monthly data exceeds total because harvest period longer than 1 month.

FRESH MARKET SUPPLY: TOMATOES AND WATERMELONS

MARKET SUPPLY: Fresh Market Tomatoes,
State of Hawaii, 1965-89



MARKET SUPPLY: Fresh Market Watermelons,
State of Hawaii, 1965-89



WATERCRESS, PROCESSED CHINESE CABBAGE AND DAIKON

WATERCRESS: Acreage, production, price, and value, State of Hawaii, 1985-89

Year	Acreage in crop	Production	Farm price	Value of sales
	Acres	1,000 pounds	Cents per pound	1,000 dollars
1985	35	1,530	79.2	1,212
1986	35	1,200	84.1	1,009
1987	40	1,230	92.9	1,142
1988	35	1,200	100.0	1,200
1989	**35**	**1,250**	**107.7**	**1,346**

PROCESSED CHINESE CABBAGE AND DAIKON: Quantity processed, price, and value, State of Hawaii, 1985-89

Year	Chinese cabbage			Daikon		
	Quantity processed	Farm price	Value of sales	Quantity processed	Farm price	Value of sales
	1,000 pounds	Cents per pound	1,000 dollars	1,000 pounds	Cents per pound	1,000 dollars
1985	1,330	15.7	209	560	12.3	69
1986	1,390	19.2	267	570	12.3	70
1987	1,300	19.5	254	570	12.2	70
1988	1,300	20.5	267	690	13.7	95
1989	**1,400**	**23.2**	**325**	**700**	**17.4**	**122**

OTHER VEGETABLES

OTHER VEGETABLES: Acreage, yield, production, price, and value, State of Hawaii, 1985-89

Year	Acreage harvested	Yield per acre	Production	Farm price	Value of sales
	Acres	1,000 pounds		Cents per pound	1,000 dollars
			BITTERMELON		
1985	20	10.5	210	78.0	164
1986	30	10.0	300	71.7	215
1987	20	11.0	220	77.1	170
1988	20	9.0	180	79.7	143
1989	**15**	**9.3**	**140**	**98.5**	**138**
			BROCCOLI		
1985	120	8.0	960	40.0	384
1986	100	7.9	790	45.5	359
1987	80	8.4	675	45.0	304
1988	90	6.1	550	47.0	259
1989	**120**	**3.8**	**460**	**48.4**	**223**
			BURDOCK		
1985	45	16.7	750	66.8	501
1986	30	17.0	510	78.0	398
1987	30	19.3	580	87.4	507
1988	25	18.0	450	90.0	405
1989	**25**	**16.0**	**400**	**110.0**	**440**
			MUSTARD CABBAGE		
1985	160	9.5	1,520	32.4	492
1986	140	11.4	1,600	34.1	546
1987	140	10.4	1,450	31.8	461
1988	120	10.5	1,260	40.4	509
1989	**100**	**10.0**	**1,000**	**45.1**	**451**
			CARROTS		
1985	15	13.3	200	20.8	42
1986	10	16.0	160	21.7	35
1987	5	16.0	80	21.0	17
1988	2	15.0	30	21.5	6
1989	**2**	**15.0**	**30**	**21.5**	**6**
			CAULIFLOWER		
1985	60	14.2	850	38.1	324
1986	70	10.1	710	53.0	376
1987	30	10.7	320	48.4	155
1988	45	10.7	480	56.0	269
1989	**45**	**12.2**	**550**	**58.3**	**320**
			DASHEEN		
1985	10	21.0	210	50.0	105
1986	10	20.0	200	64.3	129
1987	8	19.4	155	65.0	101
1988	10	22.0	220	67.0	147
1989	**7**	**17.1**	**120**	**84.3**	**101**

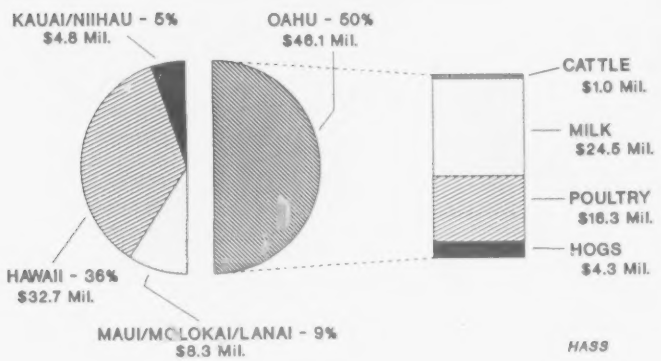
OTHER VEGETABLES: Acreage, yield, production, price, and value, State of Hawaii, 1985-89

Year	Acreage harvested	Yield per acre	Production	Farm price	Value of sales
	Acres	1,000 pounds		Cents per pound	1,000 dollars
			LOTUS ROOT		
1985	35	5.3	185	134.0	248
1986	35	4.3	150	132.0	198
1987	35	4.1	145	128.0	186
1988	30	6.3	190	117.0	222
1989	**20**	**9.0**	**180**	**114.0**	**205**
			PARSLEY		
1985	25	12.4	310	80.1	248
1986	25	12.8	320	82.2	263
1987	25	12.4	310	82.6	256
1988	25	11.2	280	83.5	234
1989	**25**	**12.8**	**320**	**89.5**	**286**
			CHINESE PEAS		
1985	15	5.3	80	196.6	157
1986	15	4.7	70	165.7	116
1987	15	4.7	70	148.7	104
1988	10	5.5	55	153.0	84
1989	**2**	**5.0**	**10**	**144.5**	**14**
			PUMPKINS		
1985	20	13.0	260	22.8	59
1986	15	13.3	200	23.2	46
1987	10	14.0	140	22.9	32
1988	8	11.9	95	22.0	21
1989	**4**	**10.0**	**40**	**23.2**	**9**
			RADISH		
1985	35	8.9	310	35.9	111
1986	20	10.3	205	35.3	72
1987	30	10.7	320	37.4	120
1988	35	9.3	325	39.0	127
1989	**25**	**8.4**	**210**	**43.2**	**91**
			ORIENTAL SQUASH (HYOTAN AND TOGAN)		
1985	35	14.0	490	26.3	129
1986	30	13.3	400	30.2	121
1987	20	15.8	315	30.7	97
1988	20	17.5	350	31.2	109
1989	**15**	**15.3**	**230**	**32.0**	**74**

1989 LIVESTOCK SUMMARY

Revenue from the livestock industry during 1989, reached a record high **$91.8** million at the farm level, 3 percent above the previous high set last year. The increase in cash receipts can be attributed to higher prices for most commodities and increased production of beef and eggs. Lower production of milk, pork, and honey resulted in smaller total returns for those commodities despite higher prices received. Oahu, with **$46.0** million, continued to lead all islands in cash receipts returned to farmers.

VALUE OF LIVESTOCK SALES BY ISLAND STATE OF HAWAII, 1989



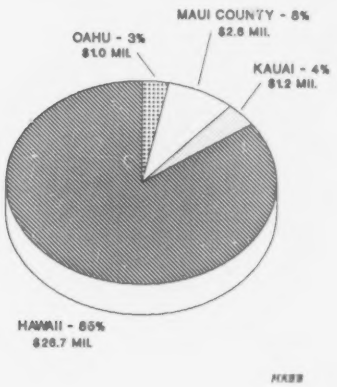
MILK

In spite of the decline in revenue from a year ago, milk hung on as the top money earner for the sixth year in a row, just edging out beef production, with cash receipts of **$31.6** million. The average price dairymen received for milk increased 2 percent from a year ago to $20.85 per hundred pounds. Declines in both milk cows and milk produced per cow resulted in a 4 percent drop in milk production and the resultant decline in revenues from the previous year.

CATTLE

The beef industry ranked second with income from sales of cattle and calves totaling **$31.5** million in 1989. The 13 percent increase resulted from a 9 percent increase in beef production and a 3 percent increase in prices from a year earlier. The inventory of cattle and calves on January 1, 1990 was 205,000 head, down 7,000 head from the previous year and reversed a two year trend in herd expansion. The bulk of the decline in herd size can be attributed to a decrease in the number of breeding cows and calves kept on hand.

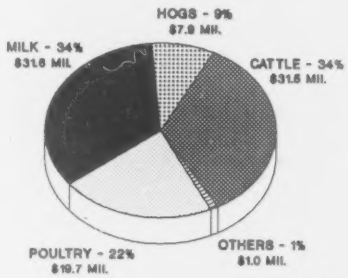
CATTLE: VALUE OF SALES
STATE OF HAWAII, 1989



HOGS

Revenue generated from the sales of hogs and pigs totaled **$7.9** million, 6 percent less than the $8.4 million farmers received in 1988. The smaller return for 1989 was caused by a 6 percent decline in marketings. The average price increased 40 cents from a year ago to $76.90 a pound. The December 1, 1989 inventory of hogs and pigs was 39,000 head, 4,000 fewer than in the prior year and the fourth consecutive year of decline.

VALUE OF LIVESTOCK SALES
BY COMMODITY
STATE OF HAWAII, 1989



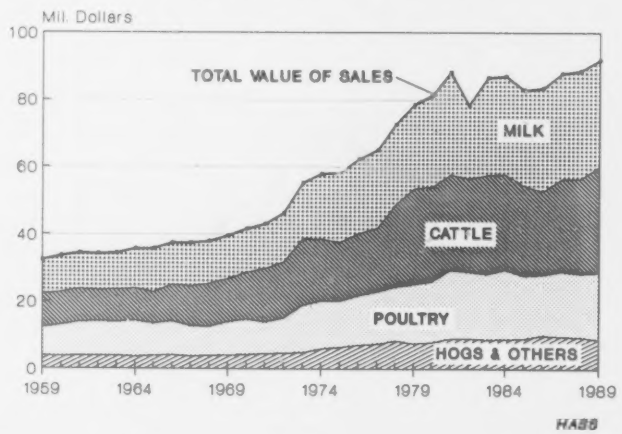
HONEY

Earnings from the sales of honey and beeswax amounted to **$557,000** compared with $725,000 in 1988. Honey production totaled 1.2 million pounds in 1989 compared with 1.6 million the previous year.

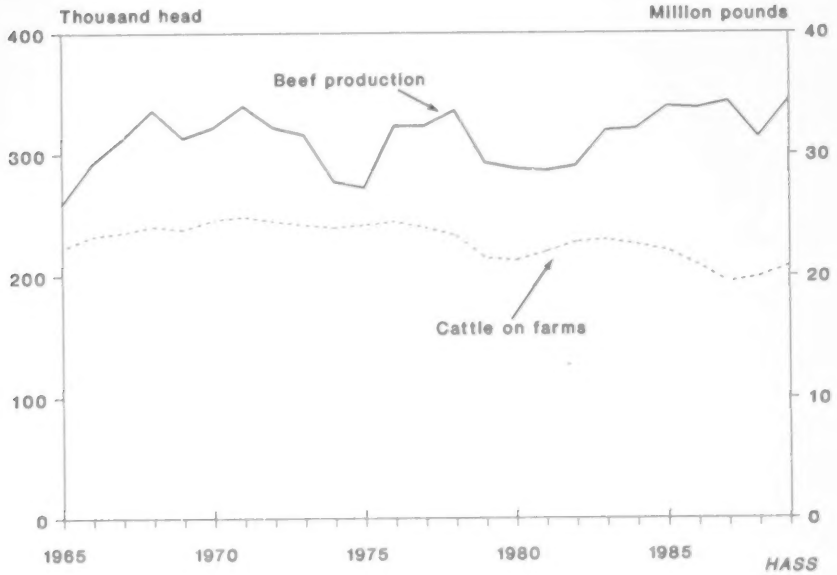
POULTRY

The poultry industry realized **$19.7** million from the sales of eggs, broilers and chickens during 1989, four percent more than a year ago. All of this increase resulted from an increase in the value of egg sales, as the returns from the sales of broilers and chickens (spent hens) declined from the 1988 levels. Cash receipts for eggs, during the 1989 marketing year increased 8 percent to $14.9 million, a result of a 1 percent increase in egg production and a 7 percent increase in the average price. Layers on hand December 1, 1989 numbered 987,000 birds, 2 percent below the inventory on hand December 1, 1988.

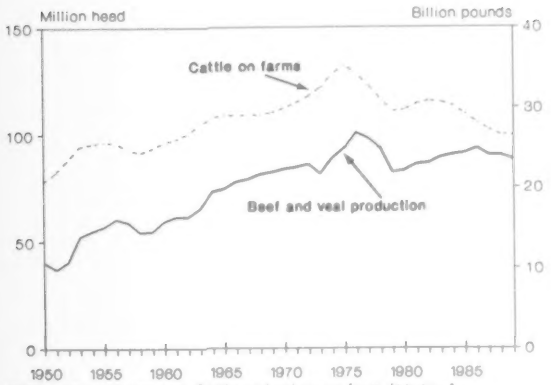
LIVESTOCK: Value of Sales
STATE OF HAWAII, 1959 - 1989



Cattle Numbers and Beef Production, State of Hawaii, 1965-89

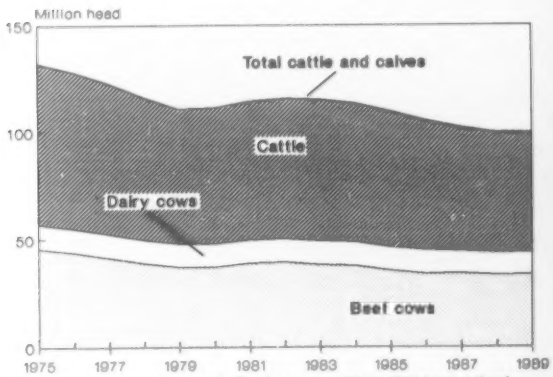


U.S. Cattle Numbers and Beef Production



1989 production forecast. Cattle and calves on farm January 1.

U.S. Cattle on Farms



Cattle on farms on January 1. Beef cows are those that have calved.

USDA

CATTLE AND CALVES: January 1 inventory by sex classes and weight, by islands, 1986-90

Year	All cattle and calves	All cows and heifers that have calved			Heifers 500 pounds and over				Steers 500 lbs. and over	Bulls 500 lbs. and over	Steers, heifers, and bulls under 500 lbs.
		Total	Beef cows	Milk cows	Total	Beef cow replace-ments	Milk cow replace-ments	Other			
	1,000 head										
	STATE [1]										
1986.....	209	92	81	11	39	14	5	20	20	6	52
1987 [2]....	199	84	72	12	42	20	5	17	23	5	45
1988 [2]....	203	89	77	12	39	15	5	19	22	5	48
1989.....	212	93	81	12	36	14	4	18	21	5	57
1990	**205**	**86**	**75**	**11**	**39**	**16**	**6**	**17**	**26**	**5**	**49**
	HAWAII										
1986 [2]....	125.3	57.8	56.3	1.5	21.0	9.5	2.6	8.9	8.8	4.4	33.3
1987 [2]....	126.4	54.4	52.8	1.6	26.4	15.6	2.4	8.4	12.2	3.9	29.5
1988 [2]....	129.0	58.8	57.1	1.7	22.8	10.9	2.2	9.7	11.9	3.4	32.1
1989.....	135.1	62.3	60.6	.7	21.0	10.4	1.6	9.0	10.3	3.3	38.2
1990	**131.5**	**56.4**	**54.8**	**1.6**	**24.1**	**11.6**	**2.4**	**10.1**	**14.2**	**3.5**	**33.3**
	KAUAI/NIIHAU										
1986.....	15.0	5.9	5.4	.5	3.0	1.3	.3	1.4	2.0	.4	3.7
1987.....	14.1	5.7	5.2	.5	2.8	1.4	.2	1.2	1.9	.4	3.3
1988.....	13.9	6.1	5.7	.4	2.5	1.2	.2	1.1	1.5	.4	3.4
1989.....	13.4	5.5	5.0	.5	2.4	.9	.1	1.4	1.6	.4	3.5
1990	**12.1**	**5.1**	**4.7**	**.4**	**2.0**	**1.0**	**.3**	**.7**	**1.6**	**.3**	**3.1**
	MAUI										
1986 [2]....	32.0	14.6	13.6	1.0	5.3	2.2	.3	2.8	2.8	.9	8.4
1987 [2]....	29.3	13.8	12.8	1.0	5.0	2.5	.2	2.3	2.8	.7	7.0
1988 [2]....	29.3	12.9	11.9	1.0	5.5	2.6	.2	2.7	2.3	.7	7.9
1989.....	28.9	13.4	12.4	1.0	4.3	2.1	.4	1.8	1.8	.9	8.5
1990	**29.7**	**13.6**	**12.7**	**.9**	**4.5**	**2.8**	**.7**	**1.0**	**2.5**	**.8**	**8.3**
	MOLOKAI/LANAI										
1986.....	5.4	3.5	3.5	0	.4	.1	0	.3	.4	.1	1.0
1987.....	0	0	0	0	0	0	0	0	0	0	0
1988.....	.7	0	0	0	0	0	0	0	.7	0	0
1989.....	1.5	1.0	1.0	0	.2	.2	0	0	.3	0	0
1990	**5.0**	**1.4**	**1.4**	**0**	**1.8**	**.2**	**0**	**1.6**	**1.2**	**.1**	**.5**
	OAHU										
1986 [2]....	31.3	10.3	2.0	8.3	9.2	.5	2.2	6.5	6.0	.3	5.5
1987 [2]....	29.2	10.1	1.5	8.6	7.7	.4	2.1	5.2	5.9	.3	5.2
1988 [2]....	30.1	10.7	1.9	8.8	8.5	.5	2.4	5.6	5.5	.4	5.0
1989.....	33.1	10.6	1.6	9.0	8.3	.3	2.2	5.8	7.0	.4	6.8
1990	**26.7**	**9.6**	**1.5**	**8.1**	**6.7**	**.3**	**2.6**	**3.8**	**6.2**	**.2**	**4.0**

[1] State totals may not add due to rounding. [2] Revised.

CATTLE: Number of operations, by size group, by islands, 1985-89 [1]

Year	Hawaii		Kauai/Niihau		Maui		Molokai/Lanai		Oahu		State	
	Total	20+ cattle	Total	20+ cattle	Total	20+ cattle	Total	20+ cattle	Total	20+ cattle	Total	20+ cattle
	Number											
1985 [2].....	470	180	170	75	170	75	50	15	90	45	950	390
1986 [2].....	440	170	160	60	170	70	40	10	90	40	900	350
1987 [2].....	465	175	170	60	180	70	5	5	80	40	900	350
1988.....	450	160	170	60	180	70	20	10	80	40	900	340
1989	**440**	**150**	**170**	**60**	**180**	**60**	**30**	**10**	**80**	**40**	**900**	**320**

[1] Difference between "Total" and "20+" is operations having 1-19 head of cattle (dairy and/or beef). [2] Revised.

CATTLE

CATTLE AND CALVES: Number sold, pounds, price, and value, by islands, 1985-89

Year	Number sold [1]	Pounds sold (live weight) [2]	Farm price (live weight) [3]	Value of sales
	1,000 head	1,000 pounds	Dollars per hundredweight	1,000 dollars
		STATE		
1985	74	65,160	40.90	26,632
1986	67	62,300	39.60	24,645
1987	62	62,940	43.50	27,401
1988	62	59,300	47.20	27,984
1989	**68**	**64,750**	**48.60**	**31,483**
		HAWAII		
1985	49.5	42,567	39.60	16,870
1986	42.1	41,244	39.70	16,385
1987	45.5	47,165	43.50	20,535
1988	49.3	49,052	47.40	23,274
1989	**55.9**	**54,368**	**49.10**	**26,711**
		KAUAI/NIIHAU		
1985	3.8	3,858	48.20	1,860
1986	4.1	3,844	45.10	1,734
1987	3.6	3,502	46.40	1,625
1988	2.4	2,235	45.70	1,021
1989	**2.8**	**2,455**	**48.80**	**1,197**
		MAUI		
1985	15.2	13,541	43.70	5,920
1986	13.7	11,250	41.50	4,671
1987	10.6	9,587	45.00	4,317
1988	8.8	6,586	47.50	3,128
1989	**6.8**	**5,520**	**46.30**	**2,558**
		MOLOKAI		
1985	2.5	2,307	39.00	900
1986	5.2	4,101	30.60	1,255
1987	0	0	0	0
1988	0	0	0	0
1989	**.1**	**91**	**40.00**	**36**
		OAHU		
1985	3.0	2,887	37.50	1,082
1986	1.9	1,861	32.20	600
1987	2.3	2,686	34.40	924
1988	1.5	1,427	39.30	561
1989	**2.4**	**2,316**	**42.40**	**981**

[1] Includes custom slaughter for home use on farms where produced and out-of-State sales of cattle and calves; but, excludes interfarm sales. State totals may not add due to rounding.

[2] Excludes custom slaughter for use on farms where produced.

[3] Prices are equivalent delivered slaughterhouse for sales on island of production and delivered shipper's dock for interisland and out-of-State sales.

CATTLE: Number of feedlot slaughter cattle sold, pounds, price, and value, by islands, 1985-89 [1]

Year	Number sold [2]	Pounds sold (live weight) [3]	Farm price (live weight)	Value of sales
	1,000 head	1,000 pounds	Dollars per hundredweight	1,000 dollars
		STATE		
1985	36.5	37,297	45.60	17,007
1986	33.6	35,463	44.50	15,781
1987	39.7	43,211	47.40	20,482
1988	39.3	42,796	49.90	21,355
1989	**45.3**	**48,322**	**51.40**	**24,838**
		HAWAII		
1985	25.2	26,022	44.70	11,632
1986	26.0	28,055	43.80	12,288
1987	31.9	35,413	47.00	16,644
1988	35.2	38,860	49.80	19,352
1989	**40.8**	**43,910**	**51.30**	**22,526**
		KAUAI/NIIHAU		
1985	1.0	1,043	44.10	460
1986	.8	840	43.10	362
1987	1.1	1,193	46.60	556
1988	.3	274	49.60	136
1989	**.7**	**773**	**51.10**	**395**
		MAUI		
1985	8.3	8,114	48.90	3,968
1986	6.3	6,043	48.00	2,901
1987	6.4	6,221	49.80	3,098
1988	3.7	3,538	51.00	1,804
1989	**3.2**	**2,969**	**53.10**	**1,577**
		MOLOKAI		
1985	1.1	1,199	42.70	512
1986	.4	377	43.20	163
1987	0	0	0	0
1988	0	0	0	0
1989	**0**	**0**	**0**	**0**
		OAHU		
1985	.9	919	47.30	435
1986	.1	148	45.30	67
1987	.3	384	47.90	184
1988	.1	124	50.80	63
1989	**.6**	**670**	**50.70**	**340**

[1] Animals fattened on grain or other concentrates which produce a carcass grading select or better.
[2] Includes custom slaughter for home use on farms where produced but excludes interfarm sales.
[3] Excludes custom slaughter for use on farms where produced.

CATTLE

CATTLE: Number of range and other slaughter cattle sold, pounds, price, and value, by islands, 1985-89 [1]

Year	Number sold [2]	Pounds sold (live weight) [3]	Farm price (live weight)	Value of sales
	1,000 head	1,000 pounds	Dollars per hundredweight	1,000 dollars
		STATE		
1985	37.5	27,863	34.50	9,625
1986	33.4	26,837	33.00	8,864
1987	22.3	19,729	35.10	6,919
1988	22.7	16,504	40.20	6,629
1989	**22.7**	**16,428**	**40.40**	**6,645**
		HAWAII		
1985	24.3	16,545	31.70	5,238
1986	16.1	13,189	31.10	4,097
1987	13.6	11,752	33.10	3,891
1988	14.1	10,192	38.50	3,922
1989	**15.1**	**10,458**	**40.00**	**4,185**
		KAUAI/NIIHAU		
1985	2.8	2,815	49.70	1,400
1986	3.3	3,004	45.70	1,372
1987	2.5	2,309	46.30	1,069
1988	2.1	1,961	45.10	885
1989	**2.1**	**1,682**	**47.70**	**802**
		MAUI		
1985	6.9	5,427	36.00	1,952
1986	7.4	5,207	34.00	1,770
1987	4.2	3,366	36.20	1,219
1988	5.1	3,048	43.40	1,324
1989	**3.6**	**2,551**	**38.50**	**981**
		MOLOKAI		
1985	1.4	1,108	35.00	388
1986	4.8	3,724	29.30	1,092
1987	0	0	0	0
1988	0	0	0	0
1989	**.1**	**91**	**40.00**	**36**
		OAHU		
1985	2.1	1,968	32.90	647
1986	1.8	1,713	31.10	533
1987	2.0	2,302	32.10	740
1988	1.4	1,303	38.20	498
1989	**1.8**	**1,646**	**38.90**	**641**

[1] Animals fattened primarily on grass and other roughage; may include some supplementary feeding of grain. Dairy cattle; calves included.
[2] Includes custom slaughter for home use on farms where produced but excludes interfarm sales.
[3] Excludes custom slaughter for use on farms where produced.

CATTLE: Commercial slaughter and marketings, by class, State of Hawaii, 1985-89

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.	Total or average
Commercial slaughter [1]													
Number – 1,000 head [2]													
1985	5.2	4.6	5.0	5.0	6.2	5.4	6.5	5.0	4.7	5.8	5.3	5.8	64.6
1986	6.4	5.0	5.6	4.9	4.8	4.6	5.8	5.1	4.7	5.1	4.6	5.3	62.0
1987	4.3	5.0	5.7	4.8	5.0	5.0	4.8	5.0	5.1	5.2	4.7	5.3	60.0
1988	4.2	4.8	5.0	4.5	4.6	4.9	4.7	5.2	4.9	4.8	4.8	4.9	57.0
1989	**5.0**	**4.8**	**5.5**	**5.3**	**5.5**	**5.6**	**5.3**	**5.9**	**4.5**	**5.4**	**4.9**	**5.3**	**63.0**
Dressed weight – 1,000 pounds													
1985	2,727	2,425	2,574	2,578	3,264	2,897	3,373	2,477	2,374	3,057	2,740	2,975	33,461
1986	3,31[illegible]	2,570	2,885	2,558	2,463	2,399	3,058	2,786	2,646	2,757	2,574	2,900	32,912
1987	2,419	2,785	3,297	2,672	2,737	2,799	2,777	2,938	2,938	2,952	2,714	2,959	33,987
1988	2,351	2,628	2,792	2,575	2,653	2,694	2,583	2,903	2,711	2,665	2,654	2,740	31,949
1989	**2,752**	**2,659**	**3,127**	**3,050**	**3,024**	**3,140**	**2,958**	**3,269**	**2,489**	**3,014**	**2,581**	**2,870**	**34,933**
Marketings [3]													
Feedlot steers and heifers, dressed weight – 1,000 pounds													
1985	1,818	1,479	1,581	1,394	2,173	1,806	2,109	1,235	1,281	2,000	1,692	1,908	20,476
1986	2,189	1,656	1,397	1,463	1,108	1,240	1,735	1,577	1,705	1,746	1,711	1,942	19,469
1987	1,631	1,804	2,285	1,778	1,886	1,980	2,012	2,130	2,015	2,089	1,953	2,160	23,723
1988	1,750	1,946	2,034	1,922	2,009	1,892	1,823	2,165	1,972	1,904	1,937	2,141	23,495
1989	**2,150**	**2,035**	**2,464**	**2,510**	**2,321**	**2,394**	**2,238**	**2,401**	**1,813**	**2,297**	**1,821**	**2,085**	**26,529**
Range steers and heifers, dressed weight – 1,000 pounds													
1985	464	500	393	478	414	500	572	568	430	365	407	505	5,596
1986	451	293	601	447	464	430	586	522	447	461	387	401	5,490
1987	268	317	334	301	299	300	265	351	296	308	290	276	3,605
1988	168	241	234	229	226	230	274	202	155	220	212	189	2,580
1989	**158**	**217**	**208**	**156**	**190**	**180**	**200**	**221**	**154**	**206**	**181**	**197**	**2,268**
Cows, dressed weight – 1,000 pounds													
1985	401	403	466	598	592	526	605	591	576	561	583	552	6,454
1986	646	613	821	591	851	590	720	667	511	556	478	565	7,709
1987	493	556	597	500	486	375	417	388	571	494	428	474	5,779
1988	313	305	395	302	286	432	343	422	468	442	401	280	4,389
1989	**328**	**292**	**306**	**232**	**369**	**423**	**397**	**558**	**404**	**410**	**454**	**482**	**4,655**
Bulls, dressed weight – 1,000 pounds													
1985	83	82	173	147	124	104	126	122	126	170	96	49	1,402
1986	101	79	137	128	111	110	88	91	54	65	69	63	1,096
1987	55	136	110	122	95	173	112	98	85	90	73	79	1,228
1988	75	91	84	77	87	95	97	68	70	53	58	84	939
1989	**75**	**74**	**108**	**112**	**104**	**103**	**83**	**49**	**78**	**61**	**85**	**66**	**998**

[1] Includes custom slaughter for home use. To convert dressed weight to live weight, divide dressed weight by 0.549 or multiply by a factor of 1.8215.
[2] Sum of monthly estimates may not add to annual total due to rounding.
[3] Excludes custom slaughter for home use and calves shipped out-of-State, but includes onfarm sales.

CATTLE

CATTLE: Farm price, by class, State of Hawaii, 1985-89 [1]

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.	Total or average
	Feedlot steers and heifers, dressed weight – Cents per pound												
1985.....	87.5	88.0	88.5	88.0	85.5	87.5	80.0	77.0	72.5	79.5	82.5	85.5	83.5
1986.....	85.0	78.0	75.5	78.5	79.0	77.0	77.5	81.0	82.0	81.5	85.5	86.5	81.0
1987.....	84.0	85.0	84.5	89.0	90.0	89.5	87.5	85.5	84.0	85.0	84.5	85.5	86.0
1988.....	88.0	90.0	92.0	94.0	92.5	89.5	88.0	89.5	91.0	90.0	92.0	93.0	91.0
1989	**93.0**	**95.0**	**96.5**	**94.5**	**94.5**	**93.5**	**93.5**	**91.5**	**93.5**	**93.5**	**93.5**	**94.5**	**94.0**
	Range steers and heifers, dressed weight – Cents per pound												
1985.....	76.0	78.5	78.5	73.0	77.5	74.0	72.0	70.5	69.5	74.0	71.0	71.0	73.5
1986.....	74.0	73.5	69.5	70.5	68.0	67.0	65.0	66.0	66.5	70.5	67.0	72.5	69.0
1987.....	76.0	74.0	75.0	77.0	79.5	75.5	76.0	76.5	77.5	77.5	76.5	77.5	76.5
1988.....	81.0	79.5	78.5	80.0	80.5	81.5	78.0	79.5	81.5	79.0	80.5	79.5	80.0
1989	**80.0**	**80.5**	**80.0**	**82.0**	**80.5**	**79.0**	**79.5**	**81.0**	**83.0**	**82.5**	**81.5**	**81.5**	**81.0**
	Cows, dressed weight – Cents per pound												
1985.....	56.0	57.0	55.5	54.5	53.5	57.0	54.5	57.0	49.5	47.5	47.5	49.5	53.0
1986.....	50.5	49.5	51.5	52.0	52.5	55.5	51.0	49.0	50.0	51.0	50.5	52.5	51.5
1987.....	53.5	55.5	54.5	55.5	54.0	54.0	56.0	56.0	56.0	58.5	58.5	57.0	55.5
1988.....	57.5	60.0	60.5	61.5	60.0	60.0	59.5	62.5	59.5	61.5	61.0	59.5	60.5
1989	**60.5**	**61.5**	**60.0**	**61.5**	**62.0**	**61.5**	**61.0**	**59.5**	**62.0**	**61.0**	**60.0**	**60.0**	**61.0**
	Bulls, dressed weight – Cents per pound												
1985.....	64.5	63.0	63.0	63.5	63.5	64.0	62.5	59.5	57.5	57.5	55.5	57.0	61.0
1986.....	55.0	61.0	58.5	57.5	62.5	64.5	62.5	58.0	59.0	59.5	62.0	61.0	60.0
1987.....	59.5	61.0	58.0	61.0	61.5	62.0	65.0	62.5	62.0	65.0	70.5	62.0	62.5
1988.....	64.0	66.0	67.0	68.0	66.0	66.5	67.5	65.0	67.0	67.0	65.5	69.0	66.5
1989	**69.0**	**65.0**	**70.5**	**71.0**	**71.0**	**69.0**	**68.5**	**67.0**	**69.5**	**69.0**	**67.0**	**66.5**	**69.0**
	All cattle, dressed weight – Cents per pound												
1985.....	80.5	80.0	79.0	76.5	78.0	78.5	73.5	70.0	65.5	72.0	72.5	76.0	75.5
1986.....	76.5	71.0	67.0	70.5	67.5	69.0	69.0	70.5	73.0	73.5	76.5	77.0	72.0
1987.....	76.5	77.0	77.0	80.0	82.0	82.0	81.0	80.0	77.5	79.5	79.5	79.5	79.5
1988.....	82.5	84.5	85.5	88.0	86.5	83.5	82.5	84.5	84.0	84.0	85.5	87.5	85.0
1989	**87.5**	**89.0**	**90.5**	**90.0**	**88.5**	**87.0**	**87.5**	**85.0**	**87.0**	**87.5**	**85.5**	**86.0**	**87.5**

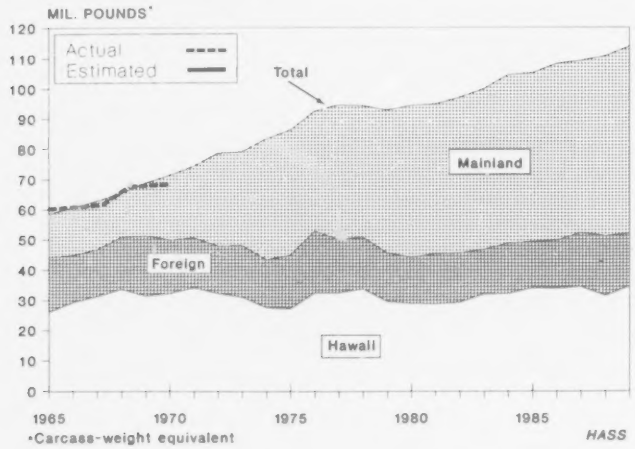
[1] Prices are for commercial slaughter cattle.

CATTLE AND CALVES: Inventory and disposition, State of Hawaii, 1985-89

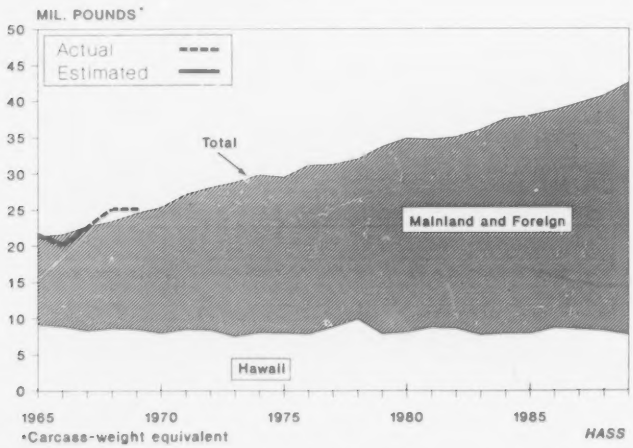
Year	Inventory beginning January 1	Calf crop	Inshipments	Marketings	Farm slaughter	Deaths	Inventory January 1 following year
	1,000 head						
1985.....	221	71	1	74	1	9	209
1986.....	209	64	*	67	1	6	199
1987.....	199	71	*	62	*	5	203
1988.....	203	76	*	62	*	5	212
1989	**212**	**70**	*	**68**	**1**	**8**	**205**

* = Less than 50.

MARKET SUPPLY: Beef and Veal,
State of Hawaii, 1965-89



MARKET SUPPLY: Pork,
State of Hawaii, 1965-89



MARKET SUPPLY: Beef and veal, pork, State of Hawaii, 1980-89

Year	Beef and veal				Pork			
	Mainland	Foreign	Hawaii [1]	Total [2]	Mainland	Foreign	Hawaii	Total [2]
	1,000 pounds (carcass weight equivalent)							
1980	50,348	15,202	28,809	94,359	26,685	133	8,012	34,830
1981	49,622	16,504	28,666	94,792	25,827	97	8,708	34,632
1982	51,709	16,273	29,048	97,030	26,392	27	8,557	34,976
1983	53,259	14,555	31,985	99,799	27,505	802	7,693	36,000
1984	55,724	16,548	32,116	104,388	28,739	875	7,878	37,492
1985	55,893	15,263	33,928	105,084	28,333	1,735	7,859	37,927
1986	58,519	15,764	33,764	108,047	28,022	2,021	8,643	38,686
1987	56,952	17,728	34,335	109,015	29,962	1,285	8,431	39,678
1988	59,437	19,749	31,403	110,589	31,587	909	8,217	40,713
1989	**61,858**	**17,345**	**34,450**	**113,653**	**33,903**	**872**	**7,716**	**42,491**

[1] Excludes slaughter cattle and calves shipped out-of-State. [2] Total supply was estimated and mainland shipments derived for beef and veal beginning 1971 and pork 1970. See page 100 for detailed explanation of the estimating procedure.

MILK

MILK: Number of operations, number of milk cows, production, sales, price, and value, by islands, 1985-89

Year	Operations [1]		Annual average milk cows	Milk per cow	Production [2]	Sold	Average price	Value of sales
	Total	10+ milk cows						
	Number			Pounds	Million pounds		Dollars per hundredweight	1,000 dollars
				STATE				
1985.....	90	20	11,300	12,566	142.0	139.8	20.25	28,310
1986.....	90	20	11,500	13,565	156.0	153.1	19.99	30,605
1987.....	90	19	11,600	13,448	156.0	153.7	20.30	31,201
1988.....	90	19	12,000	13,333	160.0	157.1	20.49	32,190
1989	**80**	**19**	**11,800**	**13,051**	**154.0**	**151.5**	**20.85**	**31,588**
				HAWAII/KAUAI/MAUI [3]				
1985.....	70	6	3,000	11,565	34.7	32.8	20.12	6,600
1986.....	70	6	3,100	12,645	39.2	36.6	19.80	7,247
1987.....	70	6	3,200	12,595	40.3	38.1	19.18	7,306
1988.....	70	6	3,200	12,169	39.0	36.4	19.99	7,278
1989	**60**	**6**	**3,200**	**11,719**	**37.5**	**35.2**	**20.19**	**7,107**
				OAHU				
1985.....	20	14	8,300	12,930	107.3	107.0	20.29	21,710
1986.....	20	14	8,400	13,905	116.8	116.5	20.05	23,358
1987.....	20	13	8,400	13,775	115.7	115.6	20.67	23,895
1988.....	20	13	8,800	13,751	121.0	120.7	20.64	24,912
1989	**20**	**13**	**8,600**	**13,547**	**116.5**	**116.3**	**21.05**	**24,481**

[1] At end of year. Difference between "Total" and "10+" is operations having 1-9 milk cows.
[2] Difference between "Production" and "Sold" is milk used on farms for human consumption, fed to calves or other uses.
[3] Kauai and Maui combined with Hawaii to avoid disclosure of individual operations.

MILK-FEED RATIO, State of Hawaii, 1985-89 [1]

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
	Pounds											
1985.....	1.76	1.75	1.77	1.72	1.73	1.68	1.77	1.80	1.90	1.90	1.84	1.89
1986.....	1.84	1.88	NA	1.82	NA	NA	1.78	NA	NA	2.02	NA	NA
1987.....	2.00	NA	NA	1.91	NA	NA	2.06	NA	NA	2.05	NA	NA
1988.....	2.06	NA	NA	1.84	NA	NA	1.83	NA	NA	1.53	NA	NA
1989	**1.50**	**NA**	**NA**	**1.66**	**NA**	**NA**	**1.66**	**NA**	**NA**	**1.67**	**NA**	**NA**

NA = Not available. Beginning February 1986, prices paid for feed quarterly only.
[1] Pounds of 20-percent dairy feed equal in value to 1 pound of whole milk.

MILK: Number of cows, milk production, and price, State of Hawaii, 1985-89

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.	Total or average
	Average number of milk cows on hand during month -- 1,000 head												
1985.....	11.8	11.7	11.6	11.4	11.1	11.1	11.1	11.1	11.0	11.0	11.2	11.3	11.3
1986.....	11.4	11.4	11.4	11.4	11.4	11.4	11.4	11.4	11.7	11.8	11.8	11.9	11.5
1987.....	11.9	11.8	11.9	11.7	11.5	11.3	11.2	11.3	11.5	11.7	11.7	11.8	11.6
1988.....	12.0	12.0	12.0	11.8	11.8	11.9	11.9	11.9	12.2	12.3	12.2	12.3	12.0
1989	**12.3**	**12.3**	**12.2**	**12.2**	**12.0**	**11.8**	**11.5**	**11.4**	**11.4**	**11.4**	**11.5**	**11.4**	**11.8**
	Average monthly production per all cows in herd -- Pounds												
1985.....	1,025	955	1,080	1,070	1,135	1,065	1,080	1,025	990	1,045	1,020	1,095	12,566
1986.....	1,150	1,030	1,210	1,200	1,230	1,165	1,165	1,095	1,015	1,060	1,040	1,120	13,565
1987.....	1,135	1,075	1,195	1,190	1,225	1,185	1,150	1,105	1,015	1,015	1,035	1,110	13,348
1988.....	1,135	1,065	1,175	1,180	1,220	1,145	1,135	1,090	1,040	1,040	1,050	1,065	13,333
1989	**1,100**	**1,000**	**1,100**	**1,080**	**1,150**	**1,120**	**1,155**	**1,130**	**1,070**	**1,045**	**1,010**	**1,115**	**13,051**
	Milk production -- Million pounds												
1985.....	12.1	11.2	12.5	12.2	12.6	11.8	12.0	11.4	10.9	11.5	11.4	12.4	142
1986.....	13.1	12.3	13.8	13.7	14.0	13.3	13.3	12.5	11.9	12.5	12.3	13.3	156
1987.....	13.5	12.7	14.2	13.9	14.1	13.4	12.9	12.5	11.7	11.9	12.1	13.1	156
1988.....	13.0	12.8	14.1	13.9	14.4	13.6	13.5	13.0	12.7	12.8	12.8	13.1	160
1989	**13.5**	**12.3**	**13.4**	**13.2**	**13.8**	**13.2**	**13.3**	**12.9**	**12.2**	**11.9**	**11.6**	**12.7**	**154**
	Average price for milk sold to plants -- Dollars per hundredweight												
1985.....	20.28	20.52	20.30	20.23	19.95	18.89	19.89	20.27	20.90	20.86	20.74	20.29	20.25
1986.....	20.25	20.22	20.19	19.61	19.75	18.75	19.17	20.12	20.71	20.74	20.67	19.91	19.99
1987.....	20.52	20.21	19.77	19.59	19.73	19.14	20.55	20.61	21.01	21.02	21.01	20.85	20.30
1988.....	21.10	20.98	20.29	19.37	20.10	19.67	20.18	20.28	20.94	21.07	21.12	21.04	20.49
1989	**21.02**	**21.04**	**20.83**	**20.79**	**20.77**	**20.76**	**20.81**	**20.79**	**20.85**	**20.84**	**20.98**	**20.75**	**20.85**

HONEY: Number of operations, colonies, honey and beeswax production, price, and value, State of Hawaii, 1985-89

Year	Operations	Number of colonies	Yield per colony (honey)	Production		Average price [1]		Value of production	
				Honey (extracted)	Beeswax	Honey (extracted)	Beeswax	Honey	Beeswax
	Number	Thousands	Pounds	1,000 pounds		Cents per pound		1,000 dollars	
1985.....	22	9	132	1,184	18	62.9	190.0	745	34
1986.....	20	9	147	1,323	18	56.0	155.0	741	28
1987.....	14	9	190	1,710	19	44.0	145.0	752	28
1988.....	12	9	179	1,611	24	43.0	132.0	693	32
1989	**11**	**9**	**135**	**1,215**	**18**	**44.0**	**124.0**	**535**	**22**

[1] Average of unprocessed bulk and processed packaged honey sold at wholesale and processed packaged honey sold at retail by farmers.

HOGS AND PIGS: December 1 inventory by classes and weight, by islands, 1985-89

Year	All hogs and pigs	Breeding	Market				
			Total	Under 60 lbs.	60-119 lbs.	120-179 lbs.	180 lbs. and over
				1,000 head			
				STATE [1]			
1985	55	9	46	21	13	9	3
1986	50	8	42	19	11	8	4
1987	47	7	40	16	12	8	4
1988	43	7	36	15	11	7	3
1989	**39**	**6**	**33**	**13**	**10**	**7**	**3**
				HAWAII			
1985	4.8	.8	4.0	2.0	1.1	.8	.1
1986	4.9	.8	4.1	1.9	1.0	.9	.3
1987	4.4	.7	3.7	1.6	1.1	.7	.3
1988	4.0	.7	3.3	1.4	1.2	.5	.2
1989	**3.4**	**.6**	**2.8**	**1.2**	**.9**	**.5**	**.2**
				KAUAI			
1985	5.4	.9	4.5	2.0	1.3	.9	.3
1986	4.8	.8	4.0	1.7	1.4	.7	.2
1987	4.6	.7	3.9	1.6	.9	.8	.6
1988	4.0	.6	3.4	1.4	1.1	.6	.3
1989	**3.6**	**.6**	**3.0**	**1.2**	**.8**	**.7**	**.3**
				MAUI			
1985	10.2	1.6	8.6	3.8	2.3	1.6	.9
1986	9.2	1.1	8.1	3.8	2.0	1.5	.8
1987	8.8	1.2	7.6	3.0	2.4	1.7	.5
1988	7.1	1.1	6.0	2.5	1.8	1.3	.4
1989	**7.9**	**1.2**	**6.7**	**3.1**	**2.1**	**1.3**	**.2**
				MOLOKAI/LANAI			
1985	1.0	.2	.8	.4	.2	.1	.1
1986	.7	.1	.6	.3	.2	*	.1
1987	.7	.1	.6	.3	.1	.1	.1
1988	.6	.1	.5	.2	.2	.1	*
1989	**.7**	**.1**	**.6**	**.2**	**.2**	**.1**	**.1**
				OAHU			
1985	33.6	5.2	28.4	12.9	8.2	5.5	1.8
1986	30.4	4.8	25.6	11.6	6.6	4.9	2.5
1987	28.5	4.3	24.2	9.8	7.1	5.0	2.3
1988	27.3	4.5	22.8	9.7	6.7	4.6	1.8
1989	**23.4**	**3.9**	**19.5**	**7.0**	**6.0**	**4.5**	**2.0**

* = Less than 50.

[1] State totals may not add due to rounding.

HOGS: Number of operations, pig crop, number and pounds sold, price, and value, by islands, 1985-89

Year	Number of operations [1]		Pig crop [2]		Number sold [3]	Pounds sold (live weight) [4]	Farm price (live weight)	Value of sales
	Total	10+	December-May	June-November				
	— Number —		---------- 1,000 head ----------			1,000 pounds	Dollars per hundredweight	1,000 dollars
					STATE [5]			
1985.....	650	430	35	41	60	10,478	76.30	7,995
1986.....	600	410	32	36	65	11,524	76.10	8,770
1987.....	600	410	30	36	63	11,241	75.70	8,509
1988.....	600	410	29	33	60	10,956	76.50	8,381
1989	**550**	**340**	**27**	**31**	**56**	**10,288**	**76.90**	**7,911**
					HAWAII			
1985.....	85	60	3.0	3.6	4.7	933	81.50	760
1986.....	80	60	3.0	3.2	5.3	997	78.00	778
1987.....	80	60	2.4	2.6	4.9	918	77.00	707
1988.....	80	60	1.9	2.1	3.9	752	78.50	590
1989	**90**	**50**	**2.0**	**2.4**	**3.9**	**745**	**81.00**	**603**
					KAUAI			
1985.....	120	55	3.1	4.0	5.0	919	82.50	758
1986.....	110	50	3.1	3.6	6.7	1,320	81.00	1,069
1987.....	120	50	3.3	4.0	7.0	1,393	80.00	1,114
1988.....	120	50	3.5	3.7	7.3	1,416	80.50	1,140
1989	**100**	**40**	**2.7**	**3.4**	**6.5**	**1,256**	**82.00**	**1,030**
					MAUI/MOLOKAI			
1985.....	110	75	8.3	9.8	13.7	2,404	80.50	1,935
1986.....	100	70	6.5	7.1	13.4	2,398	80.00	1,918
1987.....	100	75	6.5	7.6	13.3	2,373	81.50	1,934
1988.....	100	75	6.3	6.8	13.6	2,561	81.00	2,074
1989	**90**	**60**	**6.6**	**7.1**	**12.8**	**2,495**	**81.00**	**2,021**
					OAHU			
1985.....	335	240	21.0	23.2	36.6	6,222	73.00	4,542
1986.....	310	230	19.4	22.1	39.4	6,809	73.50	5,005
1987.....	300	225	17.8	21.8	37.5	6,557	72.50	4,754
1988.....	300	225	17.5	20.2	35.2	6,227	73.50	4,577
1989	**270**	**190**	**15.3**	**18.5**	**32.8**	**5,792**	**73.50**	**4,257**

[1] Difference between "Total" and "10+" is operations having 1-9 hogs; current year number of operations is preliminary.
[2] Number of pigs born during the 6-month period which were still on hand or were sold.
[3] Excludes interfarm sales; includes custom slaughter for home use; includes direct sales on farms to consumers.
[4] Excludes custom slaughter for use on farms where produced and interfarm sales.
[5] State totals may not add for number of operations and pig crop due to rounding. Sales and value data are for the 12-month period, December of the previous year through November of the following year.

HOGS, SHEEP

HOGS: Commercial slaughter and farm price, State of Hawaii, 1985-89

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.	Total or average
	Number of head -- 1,000 head [1] [2]												
1985.....	3.3	3.4	3.5	3.8	3.7	3.5	3.7	3.8	3.4	3.5	3.5	4.6	43.7
1986.....	3.5	3.3	3.5	3.6	3.7	3.4	3.6	3.9	3.7	3.9	3.5	5.1	44.7
1987.....	3.6	3.4	3.7	3.6	3.5	3.9	3.7	3.6	3.4	3.7	3.5	4.7	44.3
1988.....	3.1	3.5	3.7	3.5	3.6	3.4	3.6	3.8	3.7	3.5	3.6	4.6	43.6
1989	**3.4**	**3.0**	**3.6**	**3.5**	**3.6**	**3.9**	**3.4**	**3.5**	**3.0**	**3.4**	**3.4**	**4.5**	**42.1**
	Pounds slaughtered -- 1,000 pounds, dressed weight [1] [3]												
1985.....	470	491	514	533	560	479	509	538	473	500	534	663	6,257
1986.....	501	471	497	513	547	503	546	530	550	601	523	760	6,542
1987.....	553	489	536	523	517	574	540	528	481	526	520	670	6,457
1988.....	445	505	598	522	525	498	538	583	550	505	532	679	6,480
1989	**492**	**442**	**548**	**527**	**560**	**575**	**492**	**526**	**448**	**514**	**518**	**660**	**6,302**
	Farm price -- Cents per pound, dressed weight [4]												
1985.....	102.5	102.5	102.5	102.5	99.5	102.5	101.0	101.0	101.5	102.0	102.0	102.0	101.5
1986.....	102.0	102.0	101.5	102.5	101.0	100.0	101.5	101.5	101.5	102.0	100.5	100.5	101.5
1987.....	101.0	100.5	100.5	100.0	101.5	101.5	100.0	101.0	101.5	102.0	102.0	102.0	101.0
1988.....	100.5	102.0	103.5	102.5	101.0	101.5	101.5	101.0	102.5	102.5	102.5	102.0	102.0
1989	**101.5**	**101.5**	**104.5**	**104.0**	**102.0**	**102.0**	**101.5**	**102.5**	**103.0**	**103.0**	**102.5**		**102.5**

[1] Excludes non-inspected farm slaughter; includes custom slaughter and live hog inshipments from the mainland for slaughter.
[2] Sum of monthly estimates may not add to annual total due to rounding.
[3] To convert dressed weight to live weight: Divide by 0.75 or multiply by a factor of 1.3333.
[4] Annual average price is for marketing year December-November.

HOGS AND PIGS: Inventory and disposition, State of Hawaii, 1985-89

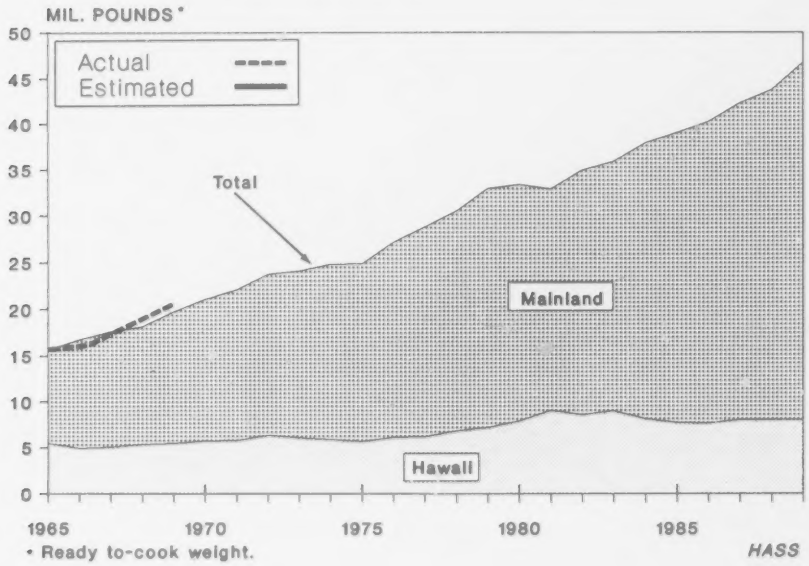
Year	Inventory December 1 previous year	Annual pig crop	Inshipments	Marketings	Farm slaughter	Deaths	Inventory December 1
	1,000 head						
1985.....	47	76	*	60	3	5	55
1986.....	55	68	*	65	3	5	50
1987.....	50	66	*	63	2	4	47
1988.....	47	62	*	60	2	4	43
1989	**43**	**58**	*	**56**	**2**	**4**	**39**

* = Less than 500 head.

SHEEP AND LAMBS: January 1 inventory by class, State of Hawaii, 1989-90

Year	All sheep and lambs	1 year old and older		3 months old and under 1 year		New crop lambs	Lamb crop
		Ewes	Wethers and rams	Ewe lambs	Wethers and ram lambs		
	1,000 head						
1989.....	24	13	5	2	2	2	6
1990	**25**	**14**	**6**	**3**	**1**	**1**	**6**

MARKET SUPPLY: Chickens and Broilers, State of Hawaii, 1965-89



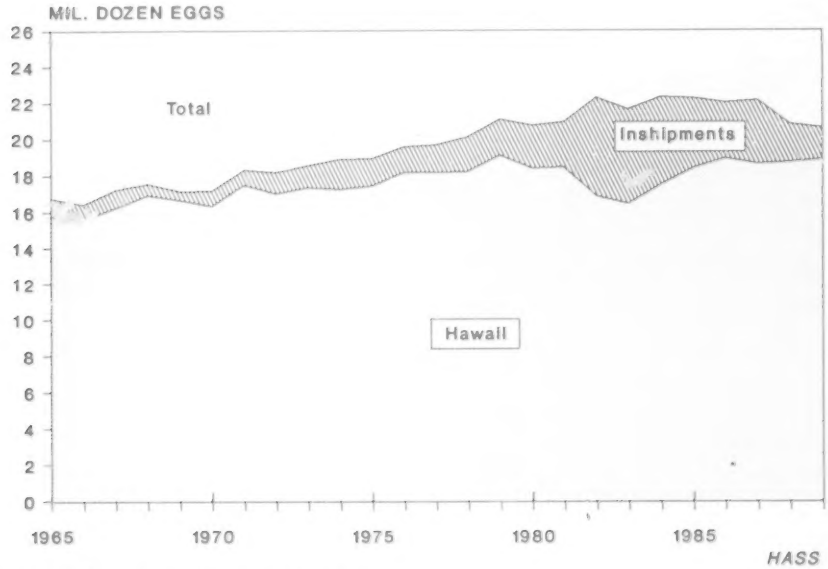
MARKET SUPPLY: Poultry meat, State of Hawaii, 1980-89

Commodity	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989
	1,000 pounds (ready-to-cook weight)									
Broilers:										
Inshipments	25,455	23,850	26,357	26,932	29,785	31,305	32,619	34,335	35,745	**38,776**
Hawaii	6,569	7,673	7,534	8,023	7,346	6,723	6,692	7,106	7,122	**7,085**
Total	32,024	31,523	33,891	34,955	37,131	38,028	39,311	41,441	42,867	**45,861**
Other chickens:										
Hawaii	1,321	1,373	1,037	924	756	983	937	882	872	**882**
Total chickens:										
Inshipments	25,455	23,850	26,357	26,932	29,785	31,305	32,619	34,335	35,745	**38,776**
Hawaii	7,890	9,046	8,571	8,947	8,102	7,706	7,629	7,988	7,994	**7,967**
Total [1]	33,345	32,896	34,928	35,879	37,887	39,011	40,248	42,323	43,739	**46,743**

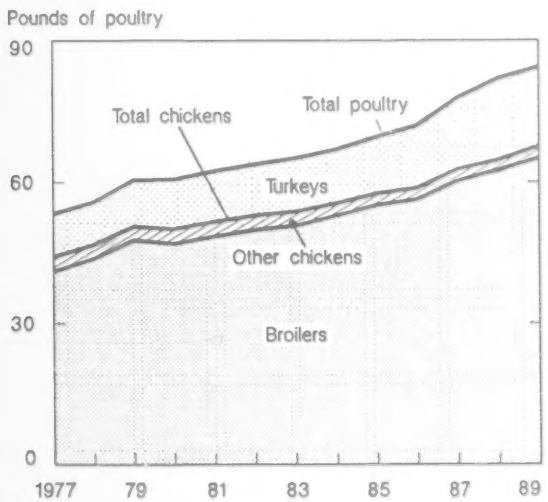
[1] Beginning 1970 total supply was estimated and mainland inshipments derived. See page 100 for detailed explanation of the estimating procedure.

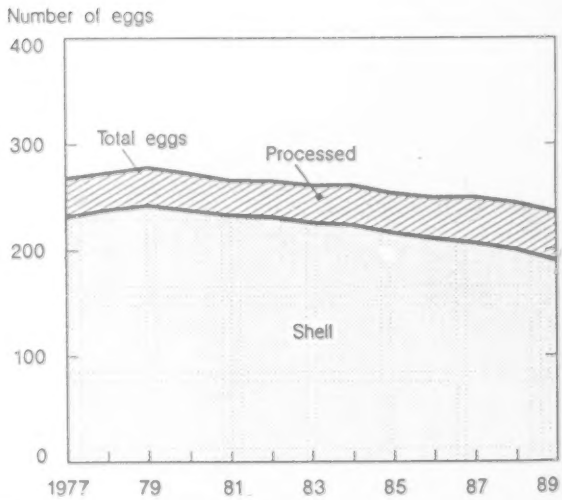
MARKET SUPPLY: EGGS

MARKET SUPPLY: Eggs,
State of Hawaii, 1965-89



Per capita consumption of poultry and eggs





Poultry is ready-to-cook weight. Eggs are shell eggs plus shell-egg equivalent of egg products.

MARKET SUPPLY: Eggs, State of Hawaii, 1985-89

Commodity	1985	1986	1987	1988	1989
	1,000 dozens				
Eggs, shell:					
Inshipments	3,842	3,066	3,497	2,091	**1,726**
Hawaii	18,375	18,917	18,608	18,700	**18,875**
Total	22,217	21,983	22,105	20,791	**20,601**

Source of inshipment data: Market News Service, Hawaii Department of Agriculture.

CHICKENS: December 1 inventory by class, by islands, 1985-89

Year	All chickens (excluding broilers)	Number of layers			Non-laying pullets		Other chickens (excluding broilers)
		Hens 1 year +	Pullets under 1 year	Total	Over 3 months	Under 3 months	
	Thousands						
				STATE			
1985	1,210	609	391	1,000	92	118	*
1986	1,185	609	364	973	107	105	*
1987	1,212	598	384	982	124	106	*
1988	1,217	633	372	1,005	135	77	*
1989	**1,216**	**698**	**289**	**987**	**132**	**97**	*
				HAWAII/KAUAI/MAUI/MOLOKAI [1]			
1985	168	80	71	151	6	11	*
1986	206	80	112	192	9	5	*
1987	194	137	31	168	14	12	*
1988	204	146	42	188	15	1	*
1989	**229**	**133**	**74**	**207**	**12**	**10**	*
				OAHU			
1985	1,042	529	320	849	86	107	*
1986	979	529	252	781	98	100	*
1987	1,018	461	353	814	110	94	*
1988	1,013	487	330	817	120	76	*
1989	**987**	**565**	**215**	**780**	**120**	**87**	*

* = Lese than 500.

[1] Kauai, Maui and Molokai combined with Hawaii to avoid disclosure of individual operations.

EGG-TYPE PULLET CHICK PLACEMENTS, State of Hawaii, 1985-89 [1]

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.	Total
	1,000 chicks												
1985	71	25	101	8	112	15	33	72	4	117	0	23	581
1986	73	7	107	31	36	32	*	130	25	87	34	37	599
1987	76	22	94	22	0	102	35	128	49	78	15	0	621
1988	82	52	66	4	73	10	23	114	7	72	0	21	524
1989	**97**	**23**	**100**	**18**	**24**	**100**	**8**	**96**	**7**	**59**	**40**	**6**	**578**

* = Less than 500.

[1] Inshipments plus local hatch.

POULTRY

CHICKENS: December 1 number of operations, sales, price, and value, by islands, 1985-89 [1]

Year	Operations	Number sold	Pounds sold (live weight) [2]	Average price (live weight) [3]	Value of sales
	Number	Thousands	1,000 pounds	Cents per pound	1,000 dollars
			STATE		
1985	55	390	1,404	16.7	234
1986	55	362	1,339	14.4	193
1987	55	350	1,260	15.2	192
1988	55	346	1,246	13.8	172
1989	**55**	**360**	**1,260**	**13.0**	**164**
			HAWAII/KAUAI/MAUI/MOLOKAI [4]		
1985	35	66	209	36.5	87
1986	36	65	208	34.5	82
1987	36	59	207	30.9	64
1988	36	59	203	37.6	76
1989	**36**	**64**	**222**	**31.2**	**69**
			OAHU		
1985	20	324	1,165	12.6	147
1986	19	297	1,101	10.1	111
1987	19	291	1,053	12.1	128
1988	19	287	1,043	9.2	96
1989	**19**	**296**	**1,038**	**9.1**	**95**

[1] Data are for December-November marketing year.
[2] To convert live weight to ready-to-cook weight, multiply by a conversion factor of 0.70.
[3] Equivalent delivered processing plant.
[4] Kauai, Maui, and Molokai combined with Hawaii to avoid disclosure of individual operations.

CHICKENS: Slaughter and price, State of Hawaii, 1985-89 [1]

Month	Number sold					Pounds sold (live weight) [2]					Average farm price (live weight) [3]				
	1985	1986	1987	1988	1989	1985	1986	1987	1988	1989	1985	1986	1987	1988	1989
	1,000 birds					1,000 pounds					Cents per pound				
December	21	24	29	16	25	72	87	105	60	89	20.0	13.5	15.0	18.0	11.0
January	27	41	35	35	34	103	153	130	132	113	17.0	12.5	12.5	13.5	10.5
February	36	23	25	28	31	127	69	88	100	104	17.0	14.0	17.0	13.0	10.5
March	34	14	22	18	35	124	51	80	67	123	16.0	23.0	16.0	16.0	12.5
April	41	33	35	21	16	148	125	123	75	55	15.5	15.0	13.5	15.0	21.0
May	26	30	31	41	24	97	113	107	145	86	19.5	13.5	16.0	10.0	14.5
June	43	40	24	39	45	154	144	92	141	159	17.0	14.5	18.0	12.0	12.5
July	40	42	22	27	23	145	154	81	96	84	15.0	13.5	15.0	15.5	15.0
August	31	29	21	27	30	110	103	74	97	106	17.5	16.0	17.5	16.5	14.0
September	31	36	64	27	31	107	134	228	93	109	17.0	13.5	14.5	16.0	13.5
October	22	22	15	30	36	77	80	53	108	124	16.0	11.5	19.0	14.0	12.5
November	38	28	27	37	30	140	106	99	132	108	14.0	17.0	14.0	12.0	13.5
Total or average	390	362	350	346	360	1,404	1,339	1,260	1,246	1,260	16.7	14.4	15.2	13.8	13.0

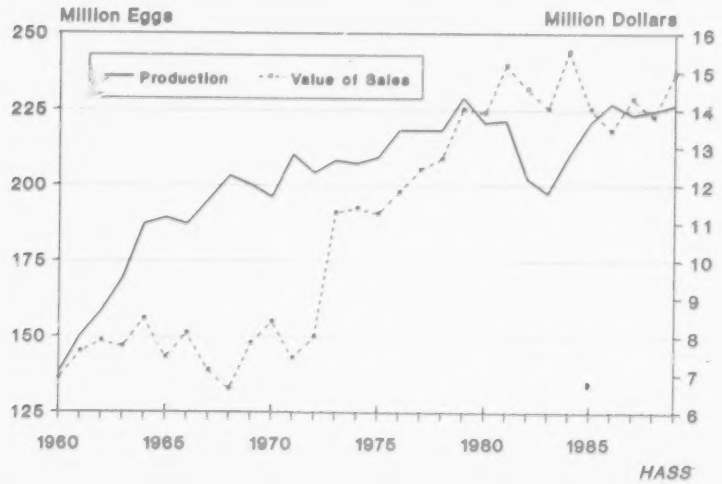
[1] Data are for December-November marketing year.
[2] To convert live weight to ready-to-cook weight, multiply by a conversion factor of 0.70.
[3] Equivalent delivered processing plant.

EGGS: December 1 number of operations, number of layers, production, sales, price, and value, by islands, 1985-89 [1]

Year	Operations with layers		Average number of layers	Average production per layer	Production [3]	Average price [4]	Value of sales
	Total [2]	100+					
	Number		1,000 birds	Eggs	Million eggs	Cents per dozen	1,000 dollars
				STATE [5]			
1985	55	20	983	224	220.5	76.3	14,020
1986	55	21	987	230	227.0	71.1	13,450
1987	55	21	975	229	223.3	76.8	14,291
1988	55	21	1,016	221	224.4	73.8	13,801
1989	**55**	**19**	**989**	**229**	**226.5**	**79.2**	**14,949**
				HAWAII/KAUAI/MAUI/MOLOKAI [6]			
1985	35	7	145	235	34.1	89.5	2,543
1986	36	9	154	242	37.3	78.0	2,428
1987	36	9	176	247	43.5	83.0	3,009
1988	36	9	182	239	43.5	81.0	2,936
1989	**36**	**7**	**192**	**222**	**42.7**	**86.5**	**3,078**
				OAHU			
1985	20	13	838	222	186.4	74.0	11,477
1986	19	12	833	228	189.7	69.5	11,022
1987	19	12	799	225	179.8	75.5	11,282
1988	19	12	834	217	180.9	72.0	10,865
1989	**19**	**12**	**797**	**231**	**183.8**	**77.5**	**11,871**

[1] Annual number of layers, egg production sales, price, and value are a December-November marketing year.
[2] Difference between "Total" and "100+" is operations having 1-99 layers.
[3] Home consumption less than 0.5 million eggs included.
[4] Equivalent delivered processing plant.
[5] Sum of island estimates may not add to State total due to rounding.
[6] Kauai, Maui, and Molokai combined with Hawaii to avoid disclosure of individual operations.

EGGS: Production and Value of Sales
STATE OF HAWAII, 1960-1989



POULTRY

EGGS: Number of layers, production, and price, State of Hawaii, 1985-89

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.	Total or average [1]
	Average number of layers on hand during month – 1,000 layers												
1985.....	980	975	961	972	987	991	983	983	993	1,003	1,005	1,007	983
1986.....	1,011	999	1,008	1,010	986	972	948	952	979	990	984	978	987
1987.....	973	957	973	985	969	969	973	984	978	973	985	985	975
1988.....	1,004	1,014	1,034	1,045	1,035	1,035	1,016	1,013	1,010	999	1,004	1,005	1,016
1989	**1,003**	**992**	**977**	**972**	**980**	**988**	**982**	**990**	**1,003**	**993**	**987**		**989**
	Egg production – Million eggs [2]												
1985.....	18.8	16.5	18.0	17.7	18.8	18.3	18.9	19.0	18.5	19.0	18.5	19.0	220.5
1986.....	19.3	17.9	19.9	19.7	19.5	18.3	18.9	18.7	18.3	19.2	18.3	18.6	227.0
1987.....	18.6	17.2	19.6	19.0	19.5	18.5	19.0	18.8	17.8	18.5	18.2	19.2	223.3
1988.....	19.2	17.0	18.7	19.2	19.4	18.4	18.9	19.0	18.4	18.7	18.3	18.8	224.4
1989	**18.3**	**16.8**	**19.0**	**18.6**	**19.6**	**19.1**	**18.9**	**19.1**	**19.5**	**19.8**	**19.0**		**226.5**
	Average farm price – Cents per dozen [3]												
1985.....	89.0	86.0	87.5	85.0	79.5	74.0	69.5	70.5	65.0	62.0	62.5	62.5	76.3
1986.....	71.0	70.5	72.5	73.5	73.0	71.5	72.5	72.0	71.0	72.0	71.0	76.0	71.1
1987.....	76.0	74.5	79.5	78.5	78.5	78.0	77.5	76.5	75.5	76.0	75.0	77.5	76.8
1988.....	79.0	77.0	76.5	76.5	73.5	72.5	72.0	69.0	70.5	72.5	69.5	74.5	73.8
1989	**75.0**	**76.0**	**76.5**	**80.0**	**81.5**	**81.0**	**81.0**	**80.0**	**80.5**	**80.5**	**83.5**		**79.2**

[1] Annual data are for a December-November marketing year.
[2] Annual totals may not add due to rounding.
[3] Equivalent delivered processing plant.

EGG-FEED RATIO, State of Hawaii, 1985-89 [1]

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
	Pounds											
1985.....	7.4	7.2	7.3	7.1	6.6	6.4	6.0	6.1	5.7	5.5	5.6	5.6
1986.....	6.3	6.3	NA	6.5	NA	NA	6.6	NA	NA	6.7	NA	NA
1987.....	7.7	NA	NA	7.7	NA	NA	7.6	NA	NA	7.5	NA	NA
1988.....	7.4	NA	NA	7.3	NA	NA	6.6	NA	NA	6.3	NA	NA
1989	**6.2**	**NA**	**NA**	**6.4**	**NA**	**NA**	**6.7**	**NA**	**NA**	**6.7**	**NA**	**NA**

NA = Not available. Beginning February 1986 prices paid for feed quarterly only.
[1] Number of pounds of laying feed, equivalent in value to 1 dozen eggs.

BROILER-TYPE CHICK PLACEMENTS, State of Hawaii, 1985-89 [1]

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.	Total
	1,000 chicks												
1985.....	255	191	194	198	224	201	219	187	180	231	205	217	2,502
1986.....	213	199	185	198	196	183	219	184	193	215	217	232	2,434
1987.....	184	193	202	245	209	200	241	186	210	194	188	242	2,494
1988.....	183	201	134	216	207	217	230	243	231	198	240	190	2,490
1989	**178**	**186**	**226**	**194**	**215**	**206**	**173**	**246**	**171**	**179**	**224**	**146**	**2,344**

[1] Inshipments plus local hatch.

BROILERS: December 1 number of operations, sales, price, and value, State of Hawaii, 1985-89 [1]

Year	Operations	Number sold [2]	Pounds sold (live weight) [2 3]	Average price (live weight) [4]	Value of sales [2]
	Number	Thousands	1,000 pounds	Cents per pound	1,000 dollars
1985	7	2,359	8,964	52.0	4,661
1986	8	2,288	8,923	51.0	4,551
1987	8	2,311	9,475	52.0	4,927
1988	8	2,261	9,496	52.0	4,938
1989	**8**	**2,249**	**9,446**	**49.0**	**4,629**

[1] Data are for December-November marketing year.
[2] Includes home consumption which is less than 1 percent of production.
[3] To convert live weight to ready-to-cook weight, multiply by a conversion factor of 0.75.
[4] All prices (including those to contract farmers) are adjusted to an equivalent delivered processing plant basis.

BROILERS: Slaughter and price, State of Hawaii, 1985-89 [1]

Month	Number sold [2]					Pounds sold (live weight) [2 3]					Average farm price (live weight) [4]				
	1985	1986	1987	1988	1989	1985	1986	1987	1988	1989	1985	1986	1987	1988	1989
	1,000 birds					1,000 pounds					Cents per pound				
December	252	216	240	148	**238**	947	837	989	654	**1,015**	51.0	51.0	50.5	49.0	**51.5**
January	181	202	189	172	**203**	634	785	782	725	**878**	50.0	51.0	51.0	50.5	**48.0**
February	182	186	160	184	**155**	695	738	664	760	**611**	51.0	50.0	53.5	51.0	**46.0**
March	196	189	166	194	**174**	752	768	681	798	**777**	53.0	51.0	52.5	51.0	**50.0**
April	171	202	187	172	**183**	680	825	754	709	**784**	53.5	51.0	53.5	52.0	**48.0**
May	219	183	221	191	**187**	899	751	948	806	**755**	54.5	51.5	52.0	51.0	**50.5**
June	218	199	204	194	**182**	864	813	812	817	**761**	53.5	51.5	52.0	53.5	**49.0**
July	207	195	193	196	**212**	774	754	785	826	**824**	50.5	50.0	52.0	54.0	**46.0**
August	203	181	198	206	**178**	730	633	832	850	**722**	51.5	51.5	51.5	54.0	**50.5**
September	176	170	177	208	**153**	651	619	661	855	**637**	51.0	51.0	52.5	52.5	**49.0**
October	192	190	186	197	**201**	701	706	764	830	**899**	51.5	50.0	52.5	51.5	**49.0**
November	162	175	190	199	**183**	637	694	803	866	**783**	52.0	51.0	51.0	51.5	**49.5**
Total or average	2,359	2,288	2,311	2,261	**2,249**	8,964	8,923	9,475	9,496	**9,446**	52.0	51.0	52.0	52.0	**49.0**

[1] Data are for December-November marketing year.
[2] Includes home consumption which is less than 1 percent of production.
[3] To convert live weight to ready-to-cook weight, multiply by a conversion factor of 0.75.
[4] All prices (including those to contract farmers) are adjusted to an equivalent delivered processing plant basis.

BROILER-FEED RATIO, State of Hawaii, 1985-89 [1]

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
	Pounds											
1985	3.6	3.6	3.8	3.8	3.9	3.9	3.7	3.8	3.7	3.8	3.9	3.8
1986	3.8	3.7	NA	3.8	NA	NA	3.7	NA	NA	3.9	NA	NA
1987	4.0	NA	NA	4.0	NA	NA	4.0	NA	NA	3.9	NA	NA
1988	3.7	NA	NA	3.7	NA	NA	3.6	NA	NA	3.1	NA	NA
1989	**2.9**	**NA**	**NA**	**3.0**	**NA**	**NA**	**2.9**	**NA**	**NA**	**3.1**	**NA**	**NA**

NA = Not available. Beginning February 1986 prices paid for feed quarterly only.
[1] Number of pounds of broiler grower equal in value to 1 pound of broiler live weight.

FEED PRICES

FEED PRICES: Average price paid by farmers for feed, State of Hawaii, 1985-89

Year	Jan.	Apr.	July	Oct.	Annual average
			Dollars per ton		
			CHICK STARTER		
1985	255	255	245	240	249
1986	240	240	245	235	240
1987	230	230	230	235	231
1988	250	255	270	290	266
1989	**290**	**290**	**280**	**280**	**285**
			BROILER GROWER		
1985	280	280	275	270	276
1986	270	270	270	255	266
1987	255	255	255	260	256
1988	275	280	300	330	296
1989	**330**	**325**	**320**	**320**	**324**
			LAYING FEED		
1985	240	240	230	225	234
1986	225	225	220	215	221
1987	210	210	210	210	210
1988	220	220	240	250	233
1989	**240**	**250**	**240**	**240**	**243**
			DAIRY FEED, 20-PERCENT PROTEIN		
1985	230	235	225	220	228
1986	220	215	215	205	214
1987	205	205	200	205	204
1988	205	210	220	275	228
1989	**280**	**250**	**250**	**250**	**258**
			ROLLED BARLEY		
1985	183	182	173	167	176
1986	163	158	135	126	146
1987	126	117	119	121	121
1988	121	121	141	191	144
1989	**187**	**186**	**190**	**180**	**186**
			ROLLED CORN		
1985	201	201	197	188	197
1986	188	187	185	174	184
1987	174	164	165	167	168
1988	171	179	193	220	191
1989	**213**	**193**	**190**	**190**	**197**
			ALFALFA PRODUCTS [1]		
1985	190	180	184	185	185
1986	178	191	178	177	181
1987	176	176	163	159	169
1988	169	173	173	173	172
1989	**235**	**235**	**240**	**230**	**235**
			PINEAPPLE BRAN		
1985	147	147	140	140	144
1986	140	119	119	119	124
1987	119	119	119	119	119
1988	119	119	131	135	126
1989	**135**	**140**	**140**	**140**	**139**

[1] 1985-88 alfalfa pellets, 1989 alfalfa hay.

AGRICULTURAL EMPLOYMENT: Workers on farms, State of Hawaii, annual averages, 1985-89 [1]

Year	Total farm employment			Hired workers by type of farm		
	Self employed farm operators	Unpaid family members	Hired workers	Sugar	Pineapple	Other
1985	2,200	1,200	10,600	4,150	1,950	4,400
1986	2,050	1,200	9,700	3,975	2,025	3,675
1987	2,600	1,100	10,700	3,810	2,050	4,750
1988	2,600	1,100	10,300	3,740	1,810	4,725
1989	**2,400**	**1,100**	**9,800**	**3,400**	**1,875**	**4,500**

[1] Due to program changes annual averages are not comparable. Averages are for January, April, July, and October surveys.

AGRICULTURAL EMPLOYMENT: Total workers on farms, State of Hawaii, 1989 [1]

Island	Self employed farm operators				Unpaid workers [2]				Hired workers			
	Jan.	Apr.	Jul.	Oct.	Jan.	Apr.	Jul.	Oct.	Jan.	Apr.	Jul.	Oct.
Hawaii	1,450	1,450	1,750	1,650	700	800	600	800	3,600	3,350	3,700	3,800
Kauai	150	150	200	200	50	50	50	100	1,100	1,200	1,250	1,150
Maui/Molokai/ Lanai	200	200	250	250	100	150	100	100	2,200	2,550	3,050	2,450
Oahu	400	400	500	500	200	200	200	200	2,400	2,400	2,500	2,400
State [3]	2,200	2,200	2,700	2,600	1,050	1,200	950	1,200	9,300	9,500	10,500	9,800

[1] Estimates for week which includes 12th of each survey month. [2] Includes family members and others working 15 or more hours per week.
[3] Sum of island estimates may not add to State total due to rounding.

AGRICULTURAL EMPLOYMENT: Hired workers by type of farm, State of Hawaii, 1989 [1]

Island	Sugar				Pineapple				Other			
	Jan.	Apr.	Jul.	Oct.	Jan.	Apr.	Jul.	Oct.	Jan.	Apr.	Jul.	Oct.
Hawaii	1,100	1,000	1,150	1,000	--	--	--	--	2,500	2,350	2,550	2,800
Kauai	950	950	950	900	--	--	--	--	150	250	300	250
Maui/Molokai/ Lanai	900	900	900	850	900	1,150	1,400	1,000	400	500	750	600
Oahu	450	500	550	550	700	700	850	800	1,250	1,200	1,100	1,050
State [2]	3,400	3,350	3,550	3,300	1,600	1,850	2,250	1,800	4,300	4,300	4,700	4,700

-- = Negligible or not applicable. [1] Estimates for week which includes 12th of each survey month. [2] Sum of island estimates may not add to State total due to rounding.

AGRICULTURAL EMPLOYMENT: Wage rates by method of pay and type of work, State of Hawaii, 1989 [1]

Type of work performed	Annual average			
	Hawaii		California	U.S.
	Farms with 1-9 workers	All farms		
	Dollars/hour			
All hired farm workers	6.25	8.35	6.39	5.36
Field and livestock workers	5.53	7.70	5.90	5.02
Supervisors	NA	12.55	10.74	8.20
Others	NA	8.20	8.77	7.08

NA = Not available.
[1] Perquisites such as room and board, housing, etc., are provided some workers in all categories, except where footnoted otherwise, in addition to wage rates shown.

AGRICULTURAL LANDHOLDINGS OF FOREIGN OWNERS

Hawaii agricultural landholdings of foreign owners, December 31, 1989

State	Total land area of State [1]	Privately owned agricultural land [2]	Foreign-owned agricultural land	Proportion of foreign-owned to privately owned agricultural land
	1,000 acres		Acres	Percent
Hawaii	4,112	1,992	106,559	5.3

[1] 1980 land area from geography division, Census Bureau.

[2] Privately held land based on T. Frey, unpublished data, Economic Research Service, USDA, 1979. Estimate of total land less public, Indian, transportation, and urban lands. Includes forest land, pastureland, cropland, range, and miscellaneous.

Source: Foreign ownership of U.S. agricultural land through December 31, 1989, Economic Research Service, USDA, ERS Staff Report No. AGES 9026.

Hawaii agricultural landholdings of foreign owners, by county, December 31, 1989

State and county	Parcels	Acres	Reported value [1]
	Number		1,000 dollars
Hawaii			
Hawaii Is - Hawaii Co.	48	86,645	203,100
Oahu Is - Honolulu Co.	6	4,169	18,012
Kauai Is - Kauai Co.	1	7,074	384
Maui Is - Maui Co.	15	8,671	107,962
Total	70	106,559	329,458

[1] Reported value is purchase price or non-purchase price (estimated value) at time of acquisition.

Source: Foreign ownership of U.S. agricultural land through December 31, 1989, Economic Research Service, USDA, ERS Staff Report No. AGES 9038.

Hawaii agricultural landholdings by country of foreign owner, by county, December 31, 1989

State and county	Canada	Germany (West)	France	Netherlands Antilles	United Kingdom	All Others
	Acres					
Hawaii						
Hawaii Is - Hawaii Co.	845	0	3,330	43,703	0	38,767
Oahu Is - Honolulu Co.	0	0	0	0	0	4,169
Kauai Is - Kauai Co.	0	0	0	0	0	7,074
Maui Is - Maui Co.	112	0	0	0	0	8,559
Total	957	0	3,330	43,703	0	58,569

Source: Foreign ownership of U.S. agricultural land through December 31, 1989, Economic Research Service, USDA, ERS Staff Report No. AGES 9038.

Use of Hawaii agricultural landholdings of foreign owners, by county, December 31, 1989

State and county	Crop land	Pasture	Forest	Other agriculture	Other non-agriculture	Total
	Acres					
Hawaii						
Hawaii Is - Hawaii Co.	37,502	21,676	1,670	24,205	1,592	86,645
Oahu Is - Honolulu Co.	189	0	0	1,109	2,871	4,169
Kauai Is - Kauai Co.	57	2,411	4,001	605	0	7,074
Maui Is - Maui Co.	93	230	0	7,705	643	8,671
Total	37,841	24,317	5,671	33,624	5,106	106,559

Source: Foreign ownership of U.S. agricultural land through December 31, 1989, Economic Research Service, USDA, ERS Staff Report No. AGES 9038.

DEFINITION OF TERMS

AGRICULTURE entails all operations performed on a "farm" in connection with planting, growing, and harvesting of crops; raising and feeding of livestock and poultry, and management. All operations in connection with preparation of farm products for market where the preparation does not alter the form of the product and transportation to the first delivery point. In Hawaii, the first delivery point is defined as the processing plant or packinghouse door or other receivers' establishment for marketings on the island of production. For off-island marketings, the first delivery point is generally the shipper's warehouse.

FARM is a place with estimated (or expected) annual sales of agricultural products of at least $1,000.

CROP PRODUCTION is the estimated amount of crop harvested and transferred at the first delivery point. Production estimates of vegetables and fruits include the quantity for fresh market and processing use.

ACREAGE IN CROP is the total acreage standing in a specific crop regardless of age or condition unless it has been declared abandoned by the operator.

ACREAGE HARVESTED is the total area harvested or partially harvested during the reporting period. A permanent or semi-permanent planting that was harvested for only a portion of the year is counted in its entirety. Acreage lost before maturity due to natural or economic factors is not included. Acreage harvested and planted repeatedly during the year is counted each time.

YIELD is the average production per acre of merchantable quality harvested and sold or utilized. This is derived by dividing total production by harvested acres.

LIVESTOCK OPERATION is defined as a place that has one or more head of the species on hand at any time during the year. It does not have to meet the definition of a farm.

LIVESTOCK PRODUCTION is the estimated amount of livestock and livestock products sold. This includes allowance for amount used on farms where produced.

FARM PRICE is a computed price to value agricultural production which may or may not reflect the average price at which actual transfer of ownership took place but which is comparable with the definition of "agriculture". See "agriculture" for the definition of pricing point.

MARKET SUPPLY includes pounds of product sold in Hawaii to both Armed Forces and civilians (outshipments excluded) plus products shipped in for civilian use. Direct inshipments to the Armed Forces are excluded.

SAMPLING METHODS AND ESTIMATION

The Hawaii Agricultural Statistics Service uses a variety of sampling techniques to produce current agricultural statistics about crops, livestock, prices, farm labor, and other information relating to the agricultural economy.

Data is collected, summarized and estimates are prepared. These estimates then pass through the Agricultural Statistics Board of the U. S. Department of Agriculture where, for major items, Hawaii estimates become part of National totals and enter the official data base for agriculture. National and State estimates are published according to a schedule set one year in advance.

The Hawaii Agricultural Statistics Service conducts many of its surveys by virtually complete **ENUMERATION** of certain parts of the population. This is unusual compared to procedures in other states but is feasible in Hawaii due to the relatively small size of certain categories of the farm universe or the extreme concentration of ownership. Vegetable and poultry surveys are among those where complete enumeration is the usual procedure.

LIST SAMPLING is a common means of data collection. Lists of farm operators are well suited for the low cost collection of information by mail. Supplementary information is included within the frame that allows the use of efficient stratified sample designs. A major disadvantage of this method is the constant change in the list frame which can never be perfect. In Hawaii, cattle and hog surveys are examples of stratified list sample designs.

AREA FRAME SAMPLING can be used alone or in conjunction with the list frame. The frame consists of an aggregation of identifiable units of land or segments which may be sampled. The frame is complete and does not suffer the type of deterioration over time as does a list frame.

MULTIPLE-FRAME SAMPLING is the use of two frames. It takes advantage of the best attributes of the area frame and the list frame, produces unbiased estimates and allows measurement of the sampling error. This survey method is currently used for agricultural employment and wage rate surveys.

OBJECTIVE YIELD SURVEYS provide information from direct counts, measurements and weights of the crop made from small plots in a probability selection of sample fields. Currently, this method is used for forecasting papaya yield four months in advance of harvest. Research is underway to determine the feasibility of using this methodology on other crops.

CHECK DATA is used in addition to producer surveys to establish final production and marketings. These include processor receipts, slaughter, vacuum cooler volume, public tax records, and inspections. Unloads at Honolulu and wholesale prices as reported by the Market News Service, are an important check data source. Also, grower organizations, such as the Hawaiian Sugar Planters' Association, provide an efficient means of obtaining information concerning sugar production.

HAWAII AGRICULTURAL STATISTICS SERVICE

Fact finding for agriculture

REPORTS ISSUED

Title and Description	Release date
CROPS	
AVOCADOS: Annual summary of acreage, yield, production, farm price, and value	May
BANANAS:	
- Monthly report on sales, farm price, and production forecast	Second week of month
- Annual summary of acreage, yield, production, farm price, and value	March
COFFEE:	
- Preliminary season estimates of acreage, yield, production, farm price, and value	January
- Final season estimates of acreage, yield, production, farm price, and value	August
FRUITS: Annual summary of fresh and processed fruit production, acreage, farm price, and value	May
GINGER ROOT: Annual summary of acreage, yield, production, farm price, and value. Planting intentions for next season	July
GUAVAS: Annual summary of acreage, yield, production, farm price, and value	May
MACADAMIA NUTS:	
- Preliminary season estimates of acreage, yield, production, farm price, and value	January
- Final season estimates of acreage, yield, production, farm price, and value	July
PAPAYAS: Monthly data on acreage, utilization, farm price, and four-month production forecast	Mid-month
PINEAPPLES: Annual summary of acreage used, fresh and processed production, fresh and processed farm price, and value	February
SUGARCANE: Estimates of acreage and production for all major U.S. producing areas	August-November
TARO:	
- Quarterly summary of taro milled for poi	Jan., Apr., Jul., Oct.
- Annual estimates of acreage in crop, production, and farm prices for Chinese and wetland taro varieties	January
VEGETABLES:	
- Monthly estimates of acreage, sales, and farm price for 15 major vegetables and melons. Includes forecast of production and harvested acreage	Second week of month
- Annual summary for all vegetables and melons. Contains data on acreage, production, and value	April
- Annual summary of quantity and farm price for commercially processed daikon and Chinese cabbage	March
FLORICULTURE AND NURSERY PRODUCTS	
ANTHURIUMS: Monthly report of mainland and foreign sales	Mid-month
FLORICULTURE AND NURSERY PRODUCTS: Annual summary of area, production, and value	May
POINSETTIAS: Fall report of plant inventory and past year sales	October
LIVESTOCK	
CATTLE:	
- Monthly slaughter, farm price, and pasture condition	Second week of month
- Annual report of inventory and calf crop as of January 1	February
CHICKENS & EGGS: Monthly report of number of layers, egg production, and farm price	Last week of month
HOGS:	
- Monthly slaughter and farm price for market hogs	First week of month
- Annual report of inventory and pig crop as of December 1	January
HONEY: Annual summary of number of colonies, production, yield, farm price, and value	February
LIVESTOCK SUMMARY: Annual marketings, average price, and value	June
MILK: Monthly data on number of milk cows, price, and production	First week of month
OTHER PUBLICATIONS	
CROP WEATHER: Weekly comments on weather and crop conditions. Rainfall data for selected stations and forecast of Honolulu wholesale unloads for 6 vegetable crops	First working day of week
FARM LABOR: Quarterly report on number of workers by type and average wage rates	Feb., May, Aug., Nov.
PRICES PAID-FEED: Quarterly report on prices for selected bulk livestock and poultry feeds	Feb., May, Aug., Nov.
STATISTICS OF HAWAIIAN AGRICULTURE: A statistical summary of the State's agricultural sector	September

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EXPLANATION OF GRAPHS AND TABLES ON PAGES 81 AND 87

BEEF-VEAL SUPPLY: Historical beef-veal supply data consists of all Hawaii production, carcass weight basis, foreign imports, converted to carcass weight equivalent and mainland inshipments, weight-as-shipped. Foreign and mainland inshipments of processed beef are excluded. Also, no adjustment is made for changes in inventory. Estimated supplies are derived as a function of U. S. per capita consumption of beef and veal, and Hawaii's de facto population (excludes the Armed Forces). Yearly historical data from 1950-1970 on Hawaii production, U. S. mainland, and foreign inshipments were totaled to serve as the dependent variable with which the supply equation was estimated. The resulting equation indicated Hawaii beef supply with a correlation coefficient of .98.

PORK SUPPLY: All historical and estimated pork supply data involved dressed weight of pork with the exception of mainland inshipments which, at times, includes live hogs shipped into Hawaii for slaughter. Foreign and mainland inshipments of processed pork are excluded. Estimated supplies are derived as a function of U. S. per capita consumption of pork and Hawaii's de facto population (excludes the Armed Forces). Yearly historical data from 1950-1969 on Hawaii production, U. S. mainland, and foreign inshipments were totaled to serve as the dependent variable in estimating a market supply equation. The resulting equation indicated Hawaii pork supply with a correlation coefficient of .90.

CHICKEN-BROILER SUPPLY: All historical chicken-broiler poundage data, as well as estimated supplies, are expressed on a ready-to-cook basis. Estimated supplies are derived as a function of U. S. per capita consumption and Hawaii's de facto population (excludes the Armed Forces). Yearly historical data from 1950-1969 on U. S. mainland inshipments and Hawaii production was totaled to serve as the dependent variable in estimating the supply equation. The resulting equation indicated Hawaii chicken-broiler supply with a correlation coefficient of .99.

Revisions to prior years are made when final figures on population and per capita consumption are available.

PHOTOGRAPHY ACKNOWLEDGEMENTS

Cover photo: Protea, courtesy Market Development Branch, Hawaii Department of Agriculture.

30-Year feature: Papayas, courtesy of Hawaii Visitors Bureau, photo by Greg Vaughn, page 4.

Coffee harvesting, Kona, Hawaii, courtesy of Hawaii Visitors Bureau, page 4.

Potted foliage, Island of Oahu, HASS staff, page 6.

General summary: Ginger root packing shed, Island of Hawaii, courtesy of Gladys Flanders, page 10.

Crop highlights: Watermelon field, HASS staff, page 20.

Macadamia nut orchard, courtesy of Ruth Smith, Kapulena Orchards, page 21.

Weather summary: Papaya harvesting, courtesy of Hawaii Visitors Bureau, page 22.

Beans, Island of Molokai, HASS staff, page 22.

Sugar: Waialua sugarcane, Island of Oahu, courtesy of Hawaii Visitors Bureau, photo by Anthony Anjo, page 25

Vegetables: Cabbage field, Island of Maui, HASS staff, page 69.

Livestock summary: Cattle, Waimea, Hawaii, HASS staff, page 72.